PUBLIC UTILITIES FORTNIGHTLY
25th ANNIVERSARY
1929-1954

Public Utilities

FORTNIGHTLY

Volume 53 No. 1 January 7, 1954

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

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ARTICLES

FEATURE SECTIONS

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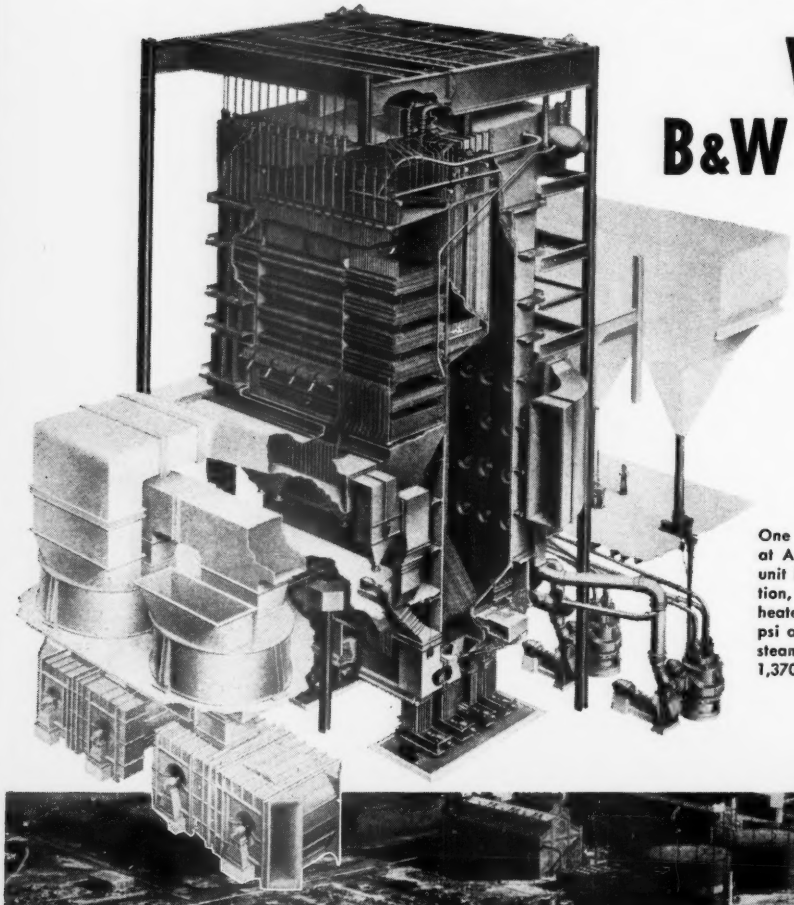
Astoria Station

With More B&W Pressure-Fired Boilers



One of two Pressure-Fired B&W Boilers installed at Astoria. This dry-bottom, Radiant Reheat Type unit incorporating B&W Divided-Furnace construction, has a design pressure of 2050 psi. Superheater outlet pressure and temperature are 1850 psi and 1000 F, with reheat to 1000 F. Designed steam output ranges between 1,200,000 and 1,370,000 lb per hr, depending upon type of fuel.

Astoria Generating Station of Consolidated Edison Co. which will ultimately have a generating capacity of about 1,000,000 kw.

oGoes on the Line

Fire

from foundations to stacks, Astoria Station of the solidated Edison Co. of New York, Inc. represents nsiderable advance in steam-electric power generat- facilities. Significant features of this modern station ude Pressure-Firing, one boiler-per-turbine, Cyclone m Separators for natural circulation, extra-fast start- of boiler and turbine, above-normal-capacity auxil- s, and automatic shut-down protection.

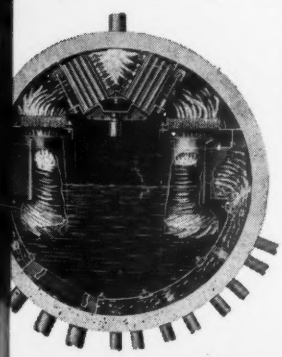
ssure-Fired Boilers

two Pressure-Fired B&W Boilers are the largest s in the world without induced draft fans. Pressure- ng was selected for this station on the basis of serv- roved economies and advantages. These include:

1. Greater efficiency due to elimination of air infiltration with consequently lower stack loss.
2. Elimination of cost of induced draft fans with attendant controls, foundations, and ducts.
3. Savings in installed kilowatts for auxiliaries.
4. Savings in operating power needed for fans.
5. Reduced maintenance due to elimination of induced draft fans.
6. Smoother operation, simpler controls, and easier starting with only forced draft fans.

ural Circulation with Cyclone am Separators

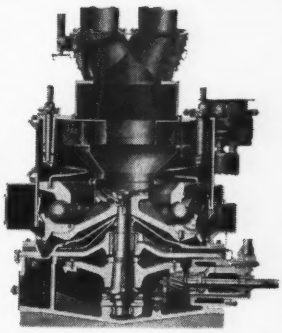
W Cyclone Steam Separators in the steam drum do a fold job. Separation of circulating water from steam rtually one hundred per cent, thus assuring a high circulating head at all times. In addition, the Cyclones, in conjunction with steam scrubbers, help maintain turbine efficiency and reduce turbine maintenance by delivering steam of extremely high purity.



Building Saving with Divided-Furnace Construction

The simple B&W Divided-Furnace construction makes it feasible to achieve the required furnace cooling surface without an excessive increase in building volume. Substantial savings in steel work and other structural components are made possible.

Type EL Pulverizers and Multi-Fuel Burners



Each unit is served by five B&W Type EL Pulverizers which utilize the ball bearing principle of grinding. There are 22 circular burners suitable for use with oil, gas, or coal on each unit. Low maintenance is an outstanding feature of the EL Pulverizer which has long-life grinding elements made of a special abrasion-resistant material. Designed for ease of operation and simplified control, this design of pulverizer satisfies every requirement for economical, efficient direct-firing of pulverized coal.

* * * * * * * * * * * *

These and many other B&W engineering advances developed to increase the efficiency of steam generation are providing satisfactory and economical central-station and industrial service in plants across the country.

We will be glad to discuss them in terms of your future plans for boiler replacements or additional plant. For a detailed description of the features incorporated in Consolidated Edison's new Astoria Station, write for Bulletin 3-560. The Babcock & Wilcox Company, Boiler Division, 161 East 42nd Street, New York 17, N. Y.

BABCOCK & WILCOX

BOILER DIVISION

G-620

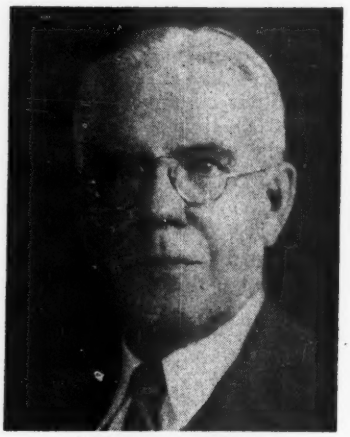
Pages with the Editors

WITH this first issue of the New Year of 1954, we present PUBLIC UTILITIES FORTNIGHTLY in a new and larger size. We hope that other changes in the format—wider columns, larger type throughout, and more space in the layout—will be favorably received by our readership. These changes are the result of a period of study going back for some time. They are designed to improve general readability and give the editorial section of the FORTNIGHTLY a more attractive over-all appearance.

STYLES in magazines change over the years, just like the styles in dress, although perhaps not so radically or noticeably. The original color reproduction of the first cover of PUBLIC UTILITIES FORTNIGHTLY, dated January 24, 1929, which appears on the frontispiece of this issue, shows that it has not changed greatly during a quarter-century. (See page 2.)

THE more recent trend has been either to smaller pocket size for digest-type magazines, or to larger sizes for magazines carrying more complete editorial coverage, with more space for articles. This is the size used by nearly all of our esteemed contemporary business magazines.

H. S. BENNION



HENRY C. SPURR

SO the twenty-fifth birthday of PUBLIC UTILITIES FORTNIGHTLY as a magazine of general circulation seemed to be a fit and auspicious occasion to make the change, which has often been suggested in the interest of better coverage. Incidentally, our former department, "Exchange Calls and Gossip," has not been discontinued, except by name. Beginning in our next issue, a new department, "Wire and Wireless Communication," will be used for coverage of telephone and other communications carrier developments.

THAT brings up another appropriate question for consideration on this twenty-fifth anniversary; namely, what has been happening, in a general way, and what has PUBLIC UTILITIES FORTNIGHTLY been doing about it in the quarter-century of its existence? The opening article is by our editorial consultant, HENRY C. SPURR, for many years the editor-in-chief of this publication. Because of his close connec-

tion with the magazine throughout its existence, he can surely write with authority of the developments since 1929.

* * * *

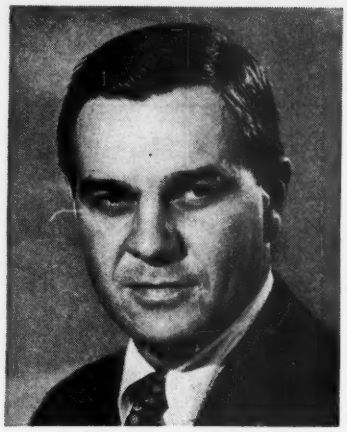
CONTINUING in the same tone, we present in this issue (beginning page 27) an interview with the dean of state regulatory commissioners (in point of continuous years of service), Judge H. Lester Hooker, a member of the Virginia State Corporation Commission for the past twenty-nine years. This interview has been prepared for us by one of Virginia's leading journalists, JAMES J. KILPATRICK. MR. KILPATRICK is a graduate of the University of Missouri School of Journalism. He is now editor of *The Richmond News Leader.*

* * * *

BY happy coincidence, the twenty-fifth birthday of this magazine happens to coincide with the seventy-fifth birthday of Edison's electric light—an event which that industry is planning to celebrate throughout the country as Light's Diamond Jubilee during the year 1954. We could think of no more authoritative author to give us a review article on this subject than COLONEL H. S. BENNION, vice president and managing director of the Edison Electric Institute.

WE found out that COLONEL BENNION had already prepared such an article in the form of an address delivered last June

JAMES J. KILPATRICK



PHILIP P. ARDERY

before the Newcomen Society in San Francisco. So, we are fortunate to be able to publish in slightly condensed form what was in substance COLONEL BENNION's original talk before the Newcomen group. As his article will indicate, COLONEL BENNION was born in Vernon, Utah, in 1889. He is a graduate of the United States Military Academy ('12) and the United States Engineering School ('15). After service with the Army Engineers in the United States, Philippines, and in France during World War I, he became assistant chief engineer of the Federal Power Commission from 1920 to 1924. He joined the old National Electric Light Association as director of engineering in 1926 and continued with its successor organization, the Edison Electric Institute.

* * * *

PHILIP P. ARDERY, whose article on escalator clauses begins on page 35, is a native of Paris, Kentucky, and a graduate of the University of Kentucky ('35) and Harvard Law School ('38). He has been engaged in private law practice in Frankfort and Louisville, except for a period of military service as an Air Force pilot in World War II and during the Korean war.

THE next number of this magazine will be out January 21st.

The Editors

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Coming IN THE NEXT ISSUE

★

THE WASHINGTON OUTLOOK FOR PUBLIC UTILITIES—1954

Analysis of the possible consequences of new developments in Congress and federal agencies respecting various utility industries during the New Year. Francis X. Welch, editor of PUBLIC UTILITIES FORTNIGHTLY, who has regularly written the "forecast" article at the beginning of each year, gives us ten new predictions for the year 1954, along with reasons why he thinks they will come to pass.

THE PRESENT PRICE LEVEL IS HERE TO STAY

Price levels in recent months have been relatively stable, although many important commodities are declining. Are we on the verge of a break in prices which will end the postwar inflation? Paul W. McCracken, professor, School of Business Administration, University of Michigan, at Ann Arbor, does not think so. There are reasons why our present high price structure cannot deteriorate as it did in the early thirties. Built-in high wages and other operating costs and government monetary policy can be expected to prevent any substantial deterioration approaching a return to prewar levels. Hence this author's belief that distortions and problems caused by the drop in dollar value since 1940 must be resolved on that basis by utilities and their regulators.

GAS REGULATION BY COMPACT? Part I.

The refusal of the U. S. Supreme Court to entertain an appeal in the controversial Phillips Petroleum Case took a good many observers by surprise. But Samuel H. Crosby, for many years an FPC examiner, gives reasons why the natural gas producers must take a long-range view towards stabilizing their operations in the light of prevailing and prospective regulatory law. He believes that gas regulation by compact might be an answer to what he calls the "Phillips dilemma."

WE ASKED OUR CUSTOMERS TO TALK BACK

A municiflpal uitility district can sometimes teach the utility companies something about public relations and this account of the experiences of the Sacramento district contains interesting details. E. A. Combatalade and Felix Rehman of the Sacramento Municipal Utility District have written the inside story of a local customer survey which produced satisfactory results.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

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Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

WALTER P. REUTHER
President, CIO and United Auto Workers.

"I cannot subscribe to the theory that a recession is inevitable. Depressions are man-made and what man can make he can avoid making."

WILLIAM G. WERNER
Retiring president, Public Relations Society of America.

"No matter how you approach it, the field of public relations, inviting level-headed, imaginative, skilled, long-range thinking, appears limitless."

WILLIAM P. STEVEN
Minneapolis Star and Tribune.

"How can we win the battle for democracy, for the rights of man, with tactics of nationalization, of monopoly, of secrecy? The answer is we cannot."

WALTER H. JOHNSON, JR.
Secretary, American Airlines.

"The future belongs to those who reach out for it, who have the courage and initiative to seize upon social, economic, and geographic changes that are always with us and to convert them into new markets and increased sales."

BENJAMIN F. FAIRLESS
Chairman of the board, United States Steel Corporation.

"Unless we can improve our collective bargaining methods and wipe out this endless and senseless succession of strikes, the righteous wrath of public opinion will some day descend, with crushing force, upon both of our houses."

ALEX AKERMAN, JR.
Secretary, Federal Trade Commission.

"I believe that there is an organized group in our country which would destroy the American system of free enterprise and replace it with some form of statism, call it as you may—Communism, state socialism, or merely government control of all business."

JAMES J. NANCE
President, Packard Motor Car Company.

"As I see it, 1954 will be the year of decision for each of us as to what we are going to do to adjust to the first big and lasting change in the business climate in thirteen years. The squeeze is on everywhere. There isn't an industry left that can be classed as a soft touch."

J. M. SYMES
Executive vice president, Pennsylvania Railroad.

"You have all seen the inflationary trend of the times since World War II, with the price of everything going sky high. The price of rail transportation has not only not gone up in keeping with these spiraling costs, but the tremendous lag between the time increased costs have been thrust upon us, and authority granted to increase prices somewhat in keeping with those increased costs, has been a serious blow to our industry."

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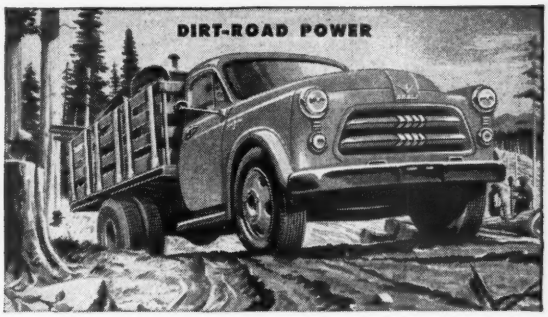

New! Great V-8's and thrifty 6's including the most powerful V-8's of all leading trucks . . . with revolutionary hemispherical combustion chamber! Available in 1½-, 2-, 2½-ton . . . standard on 2¾-, 3, 3½-ton!

with new low work-saving design...

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New! Full-vision luxury cabs with big one-piece windshield! More vision area than in any other leading make! New easy-chair seats! New cab sealing against dust, drafts! New two-tone interior styling!

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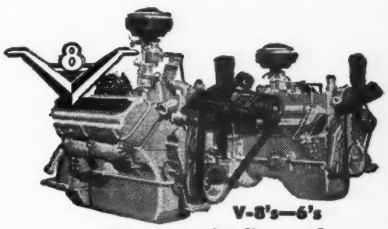
Free book on power! Explains the 3 basic kinds of engine efficiency . . . tells what they mean to you in power and economy! Get your free copy at your friendly Dodge dealer's! See him today!

New! Even greater values...yet still priced with the lowest!



SEE YOUR FRIENDLY DODGE DEALER

NEW DODGE "Job-Rated" TRUCKS

ALEXANDER R. HERON
Vice president in charge of industrial and public relations, Crown-Zellerbach Corporation.

"Under a planned economy, even halfway toward a dictatorship, we would feel most the loss of our freedom of choice."

CHARLES R. SLIGH, JR.
President, National Association of Manufacturers.

"Would any of you have been willing to predict that in 1953 there would be more television sets in Boston than there would be telephones or bathtubs? Some of the products we hear little of today are going to be the means of creating big industries for tomorrow. Those industries will provide jobs for many people."

KING PAUL OF GREECE

"Even the differences among Americans only serve to sharpen the basic unity of the American people. These are your answers to the barren promises of totalitarian nations, the promises which produce nothing. Hold onto these fine qualities. With them you will achieve a unity which will extend even beyond your national borders."

DOUGLAS MCKAY
Secretary of the Interior.

"There has been considerable discussion about the new power policy. I might say that the reaction to it for the most part is favorable. In fact the acceptance of the plan by people of the reclamation states has been most enthusiastic. The opposition to it has come naturally from the political minority, but the people who pay the taxes realize that the federal government should do only the things they cannot do themselves."

PAUL E. FEUCHT
President, Chicago & North Western Railway System.

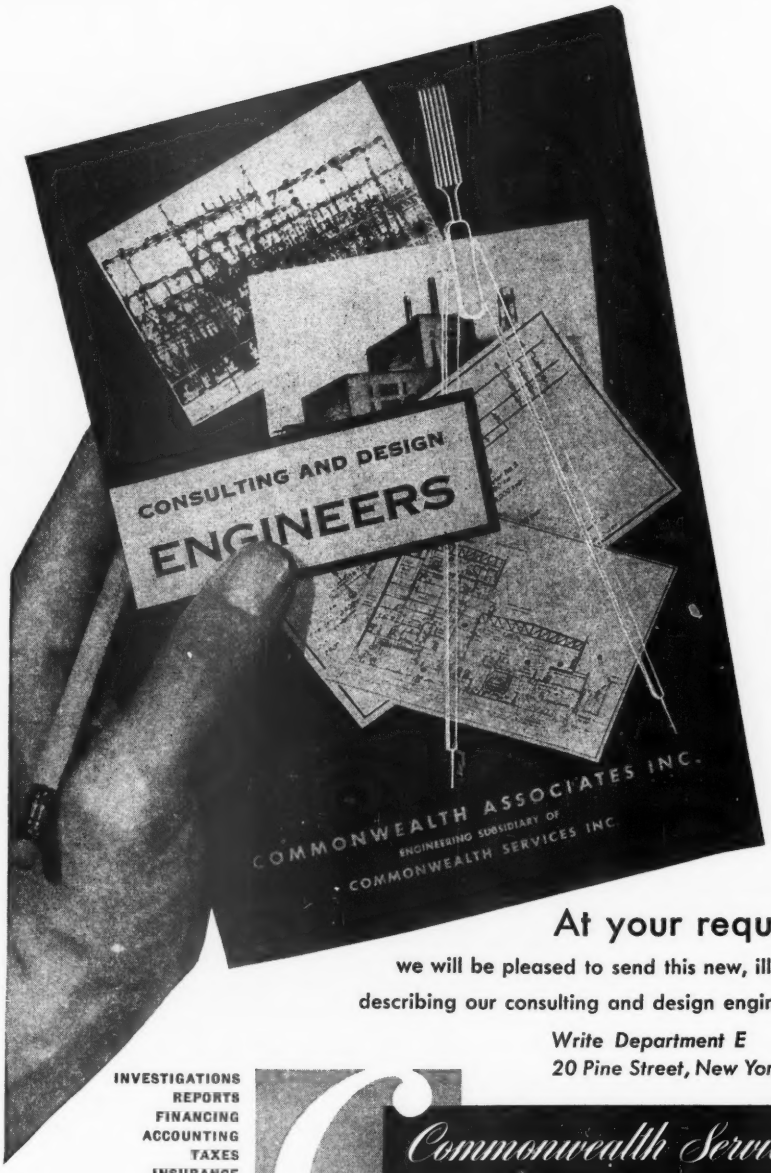
"Railroads were the first overland carriers designed more for the hauling of mass rather than class. Finally, and most important, they had the vigor of a private enterprise, which, while performing a public service, was doing so in order to make a profit for those who had invested in it. In other words, railroading from the very beginning in this country has been a private business, just like any one of the stores over on State street."

PHILIP M. MCKENNA
President, Kennametal, Inc.

"Our occupations, our liberties, and our very lives are in jeopardy until we correct prevalent fallacies that have operated in this country for more than twenty years in regard to money. Lack of knowledge and appreciation of the time-tested laws of monetary economics can wreck the machinery of our modern society in the hands of uninformed leaders, just as surely as deliberate violations of these laws have wrecked both ancient and modern civilization."

HENRY FORD II
President, Ford Motor Company.

"Price controls and government regulations are a menace in any form. The inflationary spiral is not curling upward as rapidly as it may seem. We are not in a position in the United States today where government controls of materials or prices are needed. Our economy is based on the fact that the United States operates better without controls. Put a collar on us and it will get tighter and tighter. Sooner or later it will begin to choke and repress our industry and economy."



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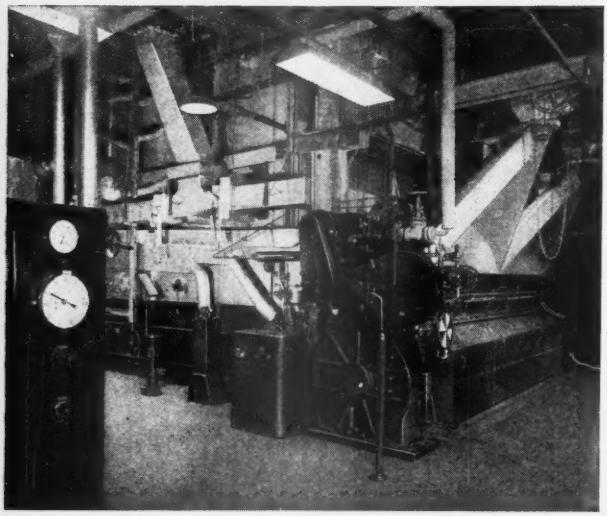

One of the two new boilers used to supply base steam loads for NCR's plant. Older pulverized coal boilers handle swings.

NCR recently installed two modern, stoker-fired boilers in their Dayton, Ohio plant. They supply the major part of the steam used in generating power for 28 factory buildings and heat for nearly 72 acres of floor space. The savings made have convinced NCR that for high efficiency and low costs, you can't beat an up-to-date bituminous coal-fired installation.

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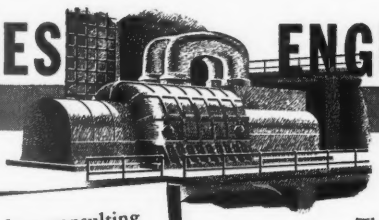
December 11, 1953.

UTILITIES ENGINEERING



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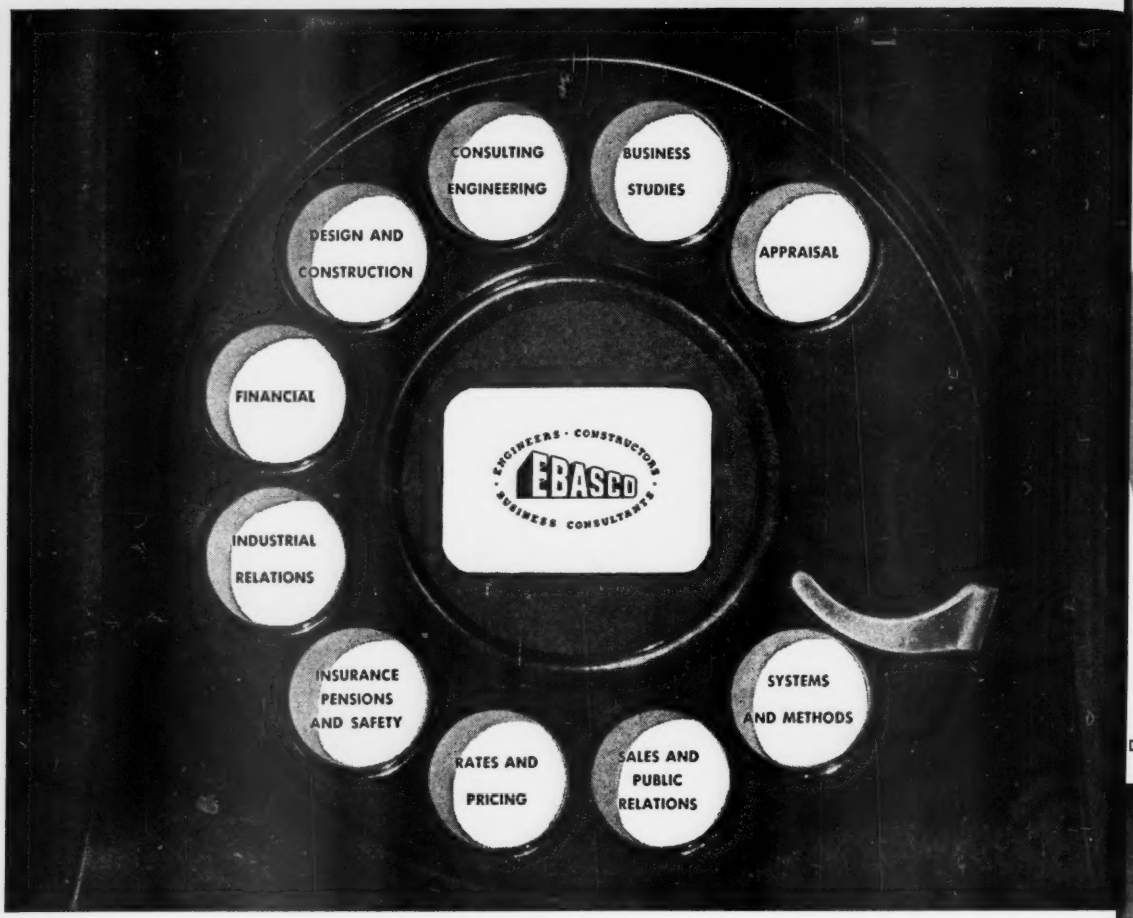

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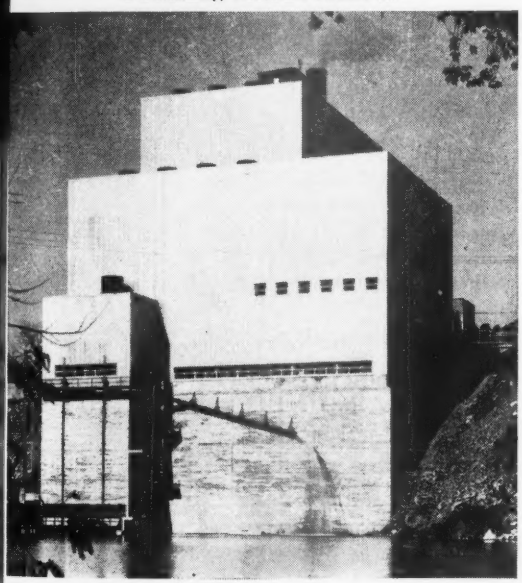

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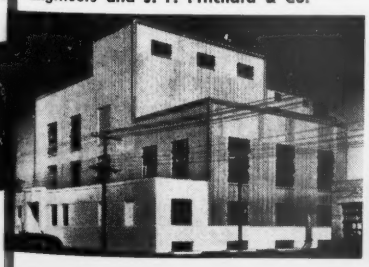

Tennessee Valley Authority Watauga Project
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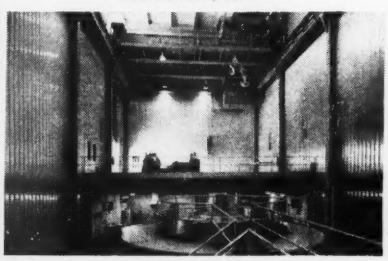

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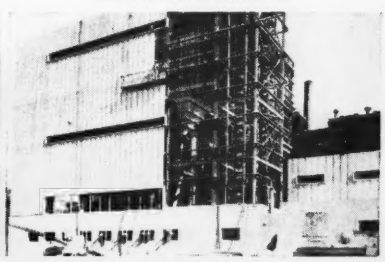

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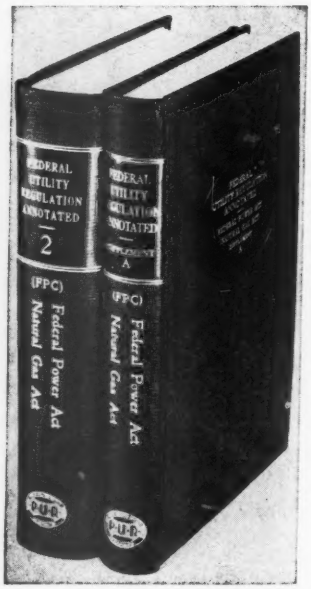

Questions relating to the determination of the cost of projects, accounting, rate-base determinations, rates, service, granting of licenses, extent of the Commission's jurisdiction, definitions of what constitutes interstate commerce, return allowance (involving new views on cost of capital), the very controversial subject of cost allocation in the fixing of gas rates, and many other vital subjects are discussed. The decisions of the Commission and of the courts as well, in such important cases as the ***Mississippi River Fuel Corporation case,*** the ***Alabama-Tennessee Natural Gas Company case*** and the ***Colorado Interstate Gas Company case*** (all decided in 1952) are explored at length in editors' notes.

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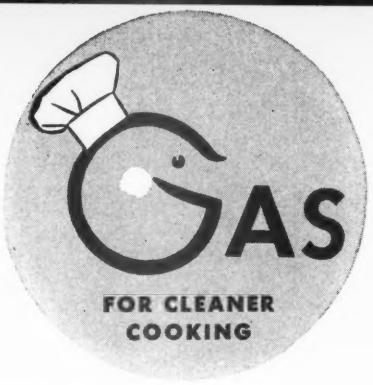

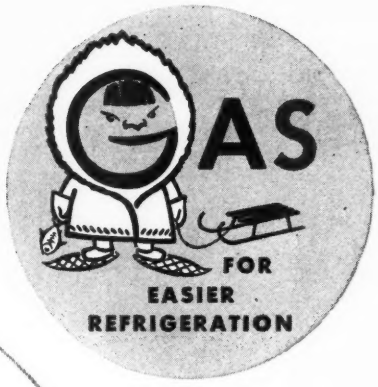

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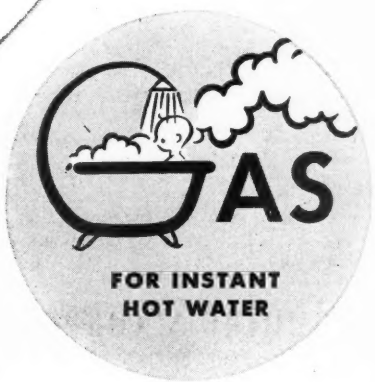
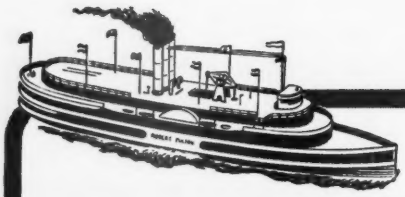
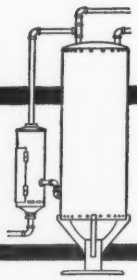


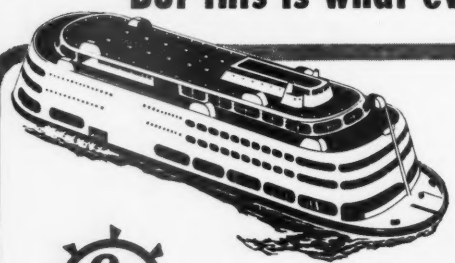
CHARLESTON GROUP: United Fuel Gas Company, Atlantic Seaboard Corporation, Amere Gas Utilities Company, Virginia Gas Distribution Corporation, Virginia Gas Transmission Corporation, Big Marsh Oil Company, Central Kentucky Natural Gas Company; **COLUMBUS GROUP:** The Ohio Fuel Gas Company; **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Binghamton Gas Works, Cumberland and Allegheny Gas Company, Home Gas Company, The Keystone Gas Company, Inc., Natural Gas Company of West Virginia; **OIL GROUP:** The Preston Oil Company.



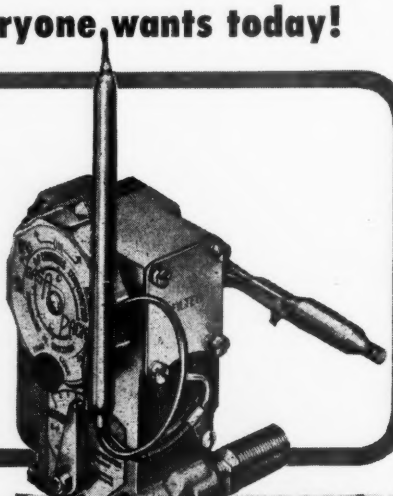
This was the last word in 1908



But this is what everyone wants today!



A-P Gasapack Water-Heater Control



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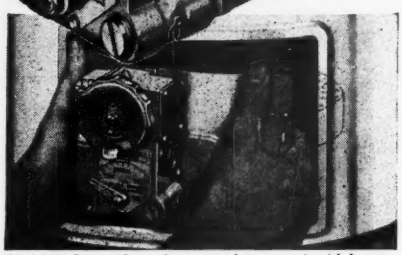
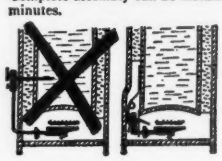


Model 50 Gasapack can be mounted as one unit with burner. Complete assembly can be installed or mounted in only a few minutes.



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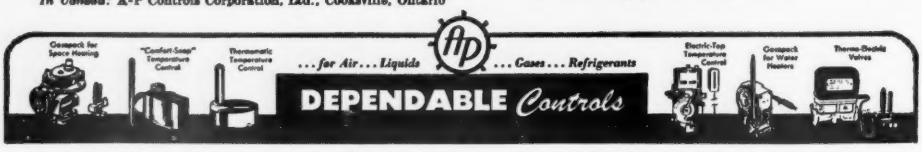

UTILITIES
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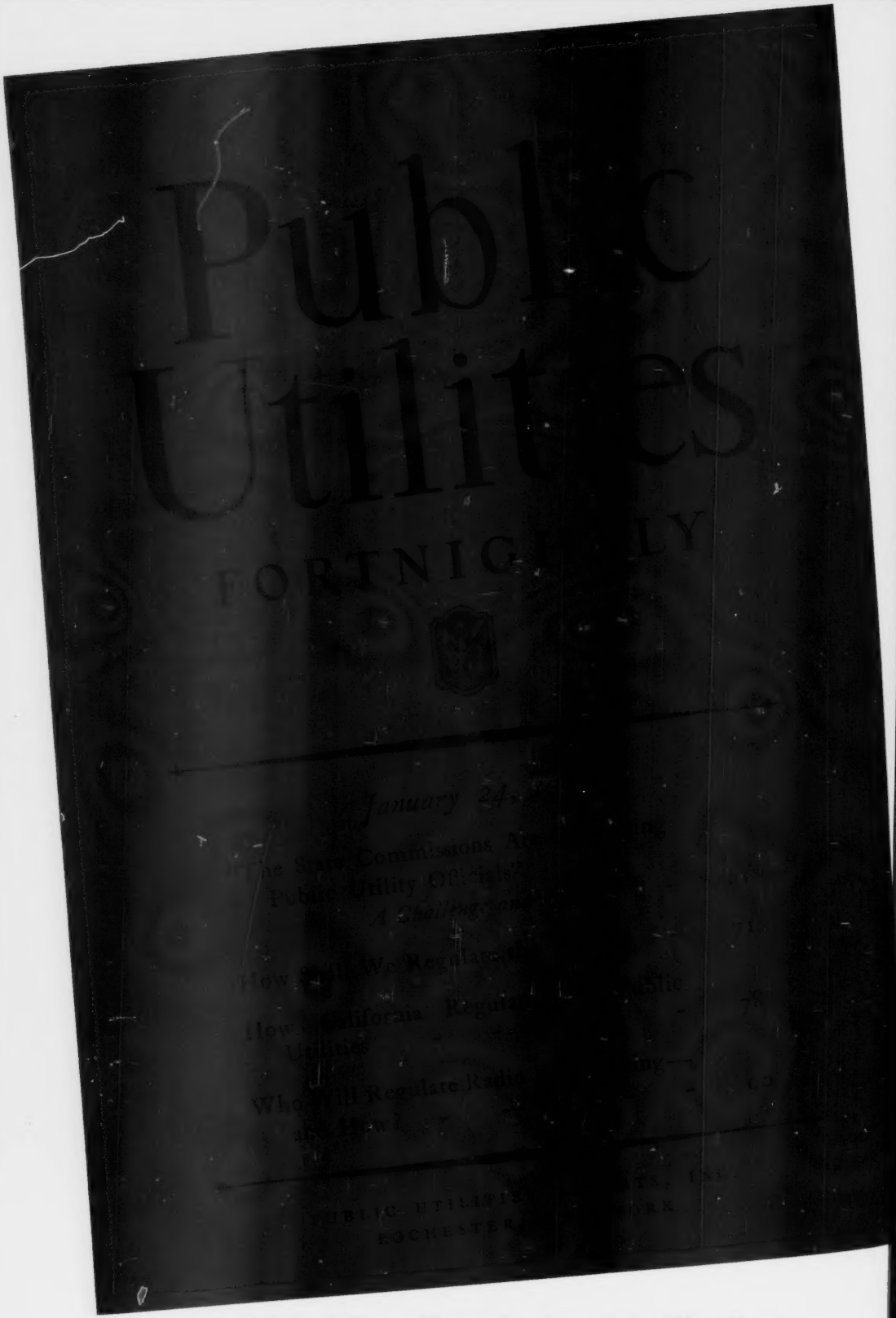
JANUARY

Thursday—7 *American Road Builders Association ends annual meeting, Atlantic City, N. J., 1954.*	**Friday—8** *American Society of Heating and Ventilating Engineers will hold annual meeting, Houston, Tex., Jan. 25–27, 1954.*	**Saturday—9** *Edison Electric Institute—American Gas Association, Taxation Accounting committees, will hold joint meeting, Hot Springs, Ark., Jan. 27–29, 1954.*	**Sunday—10** *National Appliance and Radio Television Dealers Association begins convention, Chicago, Ill., 1954.*
Monday—11 *National Rural Electric Cooperative Association begins annual convention, Miami, Fla., 1954.*	**Tuesday—12** *National Constructors Association begins annual meeting, New York, N. Y., 1954.*	**Wednesday—13** *Minnesota Telephone Association will hold annual convention, Minneapolis, Minn., Feb. 1–3, 1954.*	**Thursday—14** *New England Gas Assn., Operating Division, begins meeting, Boston, Mass.*
Friday—15 *Southern Gas Association, Air Conditioning Sales Division, begins east conference, Birmingham, Ala., 1954.*	**Saturday—16** *Missouri Valley Electric Association will hold industrial and commercial sales conference, Kansas City, Mo., Feb. 4, 5, 1954.*	**Sunday—17** *National Association of Home Builders begins annual convention and exposition, Chicago, Ill., 1954.*	**Monday—18** *American Institute of Electrical Engineers begins winter general meeting, New York, N. Y., 1954.*
Tuesday—19 *American Water Works Association, New York Section, begins winter luncheon meeting, New York, N. Y., 1954.*	**Wednesday—20** *American Gas Association ends home service workshop, Columbus, Ohio, 1954.*	**Thursday—21** *Southern Gas Association, Air Conditioning Service and Installation Division, begins west conference, Houston, Tex., 1954.*	**Friday—22** *Industrial Electrification Council ends national industrial electric heating conference, Cincinnati, Ohio, 1954.*



Original Cover Reproduction of the First Issue

(*See "Pages with the Editors."*)

Public Utilities
FORTNIGHTLY

VOL. 53, NO. 1 JANUARY 7, 1954

Lessons to Be Learned from Twenty-five Years of Regulation

This issue marks the twenty-fifth anniversary of PUBLIC UTILITIES FORTNIGHTLY *in the form of a magazine of general circulation. During that period it has served as a recorder of various events and changing developments affecting public utility regulation.*

BY HENRY C. SPURR*

IT is difficult to say definitely just when public utility regulation first began, unless the question is qualified as to circumstances. The classical legal concept of a business charged with the public interest was worked out in the British law, which we inherited, in the famous commentary of the great Lord Chief Justice Hale (1609-76). Even before the revolution American Colonies had resorted to government price fixing of certain marketable commodities. As early as 1844 two New England states set up railroad commissions, with jurisdiction limited to seeing that safe and adequate service was provided.

The constitutional basis, which set up the foundation for rate making, was undoubtedly the celebrated U. S. Supreme Court decision in Munn *v.* Illinois, decided in 1877. But the demand for rate

*Editorial consultant, PUBLIC UTILITIES FORTNIGHTLY. See, also, "Pages with the Editors."

regulation by commissions, as we know it today, probably had its beginning in the Granger agitation of the 1870's, directed principally against the railroads.

The Interstate Commerce Commission was established by act of Congress in 1887, but it did not originally have any rate-fixing powers at all. As for full-powered commission regulation of utilities in the states—including full rate-fixing powers —it seems to be generally accepted that the year 1907 was the starting point. In that year Wisconsin, New York, and Georgia established strong commissions, investing them with jurisdiction over telephone, telegraph, gas, electric, and water companies. Other states soon followed. Regulation by state commissions has, of course, since been supplemented by that of the federal commissions filling the interstate commerce gaps left by the state laws and covering special federal interests, such as the administration of the Public Utility Holding Company Act of 1935, the Federal Power Act, and the Natural Gas Act of 1938.

BRIEFLY, commission regulation came into being (1) because of the public evils of competition in the utility field; (2) because direct regulation by legislatures was unscientific and inadequate; (3) because the local authorities were not equipped to deal on an even footing with the utilities in regulatory matters; and (4) because general laws and contracts were too inflexible for reasonable regulation under varying conditions of operation.

The commission form of regulation seemed best adapted to meet the public need. The commission staffs would be technically equipped for the work. The commissions could give their full attention to the job. As their services would be available at all times it was believed they would be in position to act with promptitude. This looked good in theory, both from the public and utility angle. Has it turned out well?

The question of how close commission regulation has come to the objective set for it by its early advocates, or how far it has fallen short of their expectations, cannot be answered in much detail in an article as short as this one must be. No one asserts that commission regulation has been so perfect in all respects as to be beyond criticism. The commissioners themselves would agree to that. But criticism of believed defects is quite different from the sweeping assertion that the whole thing is a failure and ought to be abolished in favor of "yardstick" regulation or outright government ownership and operation.

BEFORE considering the answer to the question—Has public utility regulation by commissions in the United States worked out?—let us glance briefly at the alternatives. We have, of course, public ownership, either in the form of direct operation by central government or by local government management, in the greater part of the world. This is known in England as the socialization or nationalization of utility services, although for some obscure reason of semantics advocates of such a system in the United States prefer not to call it by such names in this country.

We are told by these advocates, for instance, that ownership and control of all the electric power supply for utility service in the Tennessee valley have nothing to do with Socialism. But whatever we call it,

public ownership is not the rule, or anything like it in the United States, whereas in foreign countries—especially in Europe—private company ownership and operation in the utility field seem to be the exception rather than the rule.

Are there other alternatives? Yes, in some foreign countries, especially in Latin America, we have a sort of concession form of utility operation, representing investment from the United States, Belgium, Canada, etc. Investment in these utilities by foreign capital is permitted by sufferance of the sovereign government. Rates are fixed by a minister of the government on a discretionary basis which might be called fiat regulation. And if the foreign owners become dissatisfied with their bargain they can sell out to the government at a price fixed by the latter. In some cases, such as in Argentina, the government has acted first and expropriated the properties.

THESE, therefore, seem to be the main alternatives of regulation of public utilities: (1) direct public ownership and operation, exemplified in most of Europe; (2) operation on a concession basis subject to government fiat—exemplified in many Latin American countries; (3) continued operation under private investment, subject to commission control under a law spelling out standards of reasonableness for both the investor and the consumer.

We might call the last the American plan, because commission regulation, as it is practiced today in the United States, is quite unlike parallel development elsewhere—with the possible exception of the Dominion of Canada. Comparing utility regulation in this country and abroad, the impartial student of regulation is struck first of all by the fact that nowhere else in the world today are the public utility services so much under the control and operation of private ownership as in the United States.

IT might be a fair question to ask in passing whether regulation of public utilities, as it developed in other countries, did not have at least a contributory effect in bringing about the much greater amount of public ownership we see in such countries. Conversely, this might well indicate that regulation of public utilities as it has developed in the United States might have played its part in keeping our people satisfied with a continuation of public service under a system of private enterprise, but subject to regulatory control by the government.

And if the proof of the pudding is in the eating, our system shows a very envi-

¶ "BRIEFLY, *commission regulation came into being (1) because of the public evils of competition in the utility field; (2) because direct regulation by legislatures was unscientific and inadequate; (3) because the local authorities were not equipped to deal on an even footing with the utilities in regulatory matters; and (4) because general laws and contracts were too inflexible for reasonable regulation under varying conditions of operation.*"

able record of success as compared with the amount of public utility service which the people of these other countries throughout the world are able to attain under their system. World telephone statistics afford a most striking example of this. Just a few weeks ago President Eisenhower was presented with a gold-trimmed telephone at the White House, symbolic of the 50,000,000th telephone placed in service in the United States. Compare this with 5,883,700 telephones in the United Kingdom; 3,346,000 in Canada; 2,976,953 in Western Germany; 2,644,700 in France; 1,889,353 in Sweden; and 1,540,-909 in Italy—all other foreign countries have less than a million, according to available official statistics.

In other words, we the people of the United States, with about 7 per cent of the population of the world, have managed to obtain the service of 57 per cent of all the telephones being used throughout the world, under a system which is 100 per cent privately owned and operated, subject to commission regulation.

One might wonder just how many telephones we would have in the United States today, if this utility service had been established and subsequently operated by the government, as happened in Great Britain. Would we have more or less than 50,000,-000? Conversely, one might wonder how many telephones would be operating in Great Britain or France today, if our system of private enterprise under commission regulation had been adopted from the very beginning, instead of public ownership.

Too many other political or economic factors are involved to make safe answers possible, even in approximate terms. But it is an interesting line of speculation and might be commended to those inclined to compare our regulatory system unfavorably with some abstract ideal under public operation. Judged by actual performance, it must be admitted that our system has produced some very satisfactory over-all results in terms of service to the public at large.

The picture is only a little less striking in other fields. According to the Edison Electric Institute, the United States had 42.5 per cent of the world's production of power in 1952 (about one-fifth of which is produced by public agencies). In the field of gas service, the American gas industry—by means of transcontinental natural gas pipelines—is selling a total volume of gas in public service far, far above total gas consumption in the rest of the world. Our railroad system exceeds all others in mileage, tonnage, passengers, or any other criteria of measurement, and so do our commercial airlines.

This superb record of the American utility industries has not been due entirely, of course, to regulation. It is part and parcel of the great American success story of all American industries—the success of the free enterprise system, generally. But the fact we have been able to retain our utility industries as part of that free enterprise system, and the fact that other countries, for the most part, have not succeeded in doing this, certainly indicates a most persuasive degree of success for the American brand of utility regulation.

But such a comparison of operating statistics does not give a conclusive answer to the idealist's question as to whether public utility service in the United States

Commissions Are Here to Stay

" . . . it would appear that whatever its occasional shortcomings might be, commission regulation has earned and merited the support of the American people and the American lawmakers. Hardly anyone today would seriously suggest getting rid of it, or trying something else to take over our public utility service field, as a whole."

might even be better, more widely used, cheaper in price, and of a higher quality under some other system as yet not accepted in this country. We have even heard statements to the effect that commission regulation has been an abject failure compared with some hypothetical objective of accomplishment.

Such statements are of little value because they cannot be proved. They are not statements of fact but mere expressions of opinion, usually highly colored by the predilections or prejudices of the individuals making them, and asserted without a full and dispassionate consideration of all the facts. One would not look for a favorable opinion as to the effectiveness of regulation from a utility executive holding the extreme view that utility operations should be absolutely untrammeled; not from the advocates of government ownership and operation of utilities who believe that to be the only solution of the utility problem. Such opinions must be discounted.

THE opinions of those who are disappointed and upset by commission and court decisions on controversial regulatory questions and who, therefore, believe regulation futile—at least until the courts and commissions change their views—must also be taken with several grains of salt. Such views are quite like that of the gentleman who went about declaring our law courts worthless and all persons connected with the judicial proceedings, including judges, lawyers, and juries, untrustworthy.

"No one can get justice in the courts," he cried. "I know that from bitter personal experience. In my lifetime I have had five lawsuits. I have lost every last one of them; and in every last one of them I was right."

Of course there is the difficulty that

commission regulation is not an easy, simple thing, in which failure or success could be tested beyond question by uncomplicated and accepted methods. The truth is very few people have sufficient knowledge of the fact to express an intelligent opinion as to how far commission regulation has succeeded or failed.

The effectiveness of utility regulation, if it is to be fairly tested, must embrace not only a comparison of operating statistics, dollar investments, rates presently charged. It must have more dimensions than that. It must go back over a span of time. It must show whether commission regulation is an institution which can weather bad times as well as good times and stand up under hostile criticism and political attack. It must be shown that it not only has obtained public confidence, but that it deserves and has earned such confidence.

THAT brings us to the unique characteristic of commission regulation which we do not find in the alternative forms of utility operation or control. The keystone of commission regulation is its *elasticity*. Commission regulation did not spring full grown like Pallas Athena from the brains of our creating legislators. Commission regulation as it has developed in the United States is the product of trial and error. It is something which apparently refuses to be bound by any formula but it always somehow eventually aligns itself with general standards of reasonableness.

There have been variations and deviations, of course. There have been political crises, scandals, and investigations. But the fact remains that not one single state, since the full-powered commissions began in 1907, has ever abolished its regulatory agency or conceded that it had failed as an institution for controlling utility services in the public interest. There have been changes in name and composition and even "ripper" bills to reflect passing political unheavals. But the commissions, as commissions, always continue stronger than ever.

As a matter of fact, the commissions have grown steadily in size and number, in the scope of power and jurisdiction delegated to them by statute. Today all forty-eight states have some kind of state commission, although in two or three the jurisdiction is still quite limited. Delaware, in 1949, was the last remaining state to fall in line by setting up a full-powered public service commission where none had existed before.

This then is a continuous history of *statutory growth* of more than forty-five years since that birthday of 1907. How about other measurements of growth? How about the activity of the commissions in working out their guiding principles of regulation in the public interest?

SINCE its publication began in 1915 there have been issued more than 200 volumes of *Public Utilities Reports*, familiarly known as PUR, the national reporting system of the commission and the court decisions relating to the work of the commissions. These decisions reflect the increasing importance and activity of the commissions. During the twenties the attention of the commission was drawn to the service expansion problems of the gas, electric, and telephone industries. The depression years of the thirties brought forth the battle of conflicting theories of rate regulation. More and more duties were planted on the commission during the

war years of the forties. And since then the postwar inflation years have brought a host of new problems, but never, never a diminution of activity or jurisdiction.

This brings us to the most active and controversial events of the past twenty-five years. They began to boil up in the late twenties in charges against a monopoly and so-called "power trust," which had culminated in the Walsh resolution so bitterly debated in the United States Senate during the administration of former President Hoover. This eventually led to the 8-year investigation of the holding companies by the Federal Trade Commission and the passage of the Holding Company Act and the revision of the Federal Power Act in its present form. It was a period of almost hysterical criticism against commission regulation.

IT was January 21, 1929, four days before the first issue of PUBLIC UTILITIES FORTNIGHTLY, as a magazine of general circulation, that the old *New York World* published an editorial entitled "The Breakdown of the Public Service Commissions." This editorial stated as follows:

> The high hopes with which the existing system of public utility regulation was inaugurated in this state have not been fulfilled. It is a fact beyond dispute that in certain important respects this system has broken down. . . .
>
> The new system was intended to end the existing evils. Its purpose was to put the utilities under such positive commission control as to assure them a fair return and at the same time assure the public of reasonable rates, adequate service, efficient operation, and proper financial management. In large measure these hopes have failed. . . .
>
> The public has come to realize that its expectations of twenty years ago have not been fulfilled; that regulation has not worked as it was intended to work; that many of the old evils have continued; that new ones have developed; and that the intricate questions of law and administration which govern the cost to the citizen of light, fuel, power, local transportation, and telephone communication are in a desperate tangle.
>
> There is widespread recognition of the fact that the present system no longer protects the public's interests adequately. . . .
>
> What is needed is no mere tinkering with the existing law but a comprehensive investigation to discover exactly how regulation has worked in the state of New York, what difficulties have

¶ "THIS *superb record of the American utility industries has not been due entirely, of course, to regulation. It is part and parcel of the great American success story of all American industries —the success of the free enterprise system, generally. But the fact we have been able to retain our utility industries as part of that free enterprise system, and the fact that other countries, for the most part, have not succeeded in doing this, certainly indicates a most persuasive degree of success for the American brand of utility regulation.*"

been encountered, and by what means the present system can be reconstructed to serve effectively the purposes for which it was originally established. With this aim in view we believe that the legislature should provide for a special Public Service Investigating Commission to make a thorough survey. . . .

We face a fact and not a theory. The law of 1907 has broken down.

Probably it is a little unfair to comment, in passing, that since that editorial the old *New York World* has disappeared into the syndicated bosom of the Scripps-Howard system, while the state commissions are still going strong—as already observed. Of course, some of the charges complained of in the old *World* editorial came on to be heard at length by investigating tribunals in Albany, as well as in Washington or elsewhere. Reforms were bitterly debated and a good many were placed on the statute books. But, note well, they invariably had the effect of *strengthening* the state commission and the federal commissions.

PUBLIC UTILITIES FORTNIGHTLY arrived on the scene in time to mirror the more exciting exchanges. Among those whose discussions were found in contributed articles in past issues, we note such names of bygone personalities as the late U. S. Senator Norris (Republican, Nebraska), father of the TVA; the late U. S. Senator Couzens (Republican, Michigan), father of the FPC; the then Democratic Senator from Alabama, Hugo Black—now a member of the U. S. Supreme Court; and an article by the late, then governor of New York, Franklin D. Roosevelt, outlining a live-and-let-live policy in the controversial field of public ownership of public utilities by local option.

It was in the early thirties, specifically in the case of Los Angeles Gas & E. Corp. *v.* California R. Commission (289 US 287, PUR1933C 229), that the U. S. Supreme Court first started its retreat away from required adherence to the fair value doctrine laid down in Smyth *v.* Ames, decided in 1898. In the Los Angeles Case, the court said it did not sit as a board of review to pass on methods of regulatory boards in the absence of evidence that rates finally fixed were actually confiscatory. This case foreshadowed two more sweeping decisions in the following decade: the Natural Gas Pipeline Case in 1942 (42 PUR NS 129) and the Hope Natural Gas Case in 1944 (51 PUR NS 193).

ON both of these fronts—namely, the entrance of the federal government into the electric power field and the abandonment by the federal judiciary of the fair value doctrine—vigorous discussions pro and con raged in PUBLIC UTILITIES FORTNIGHTLY, issue after issue. Commissioners, legislators, educators, executives, and professional specialists joined with the politicians in threshing over the economic consequences of the fair value rule and the advantages, or lack of advantages, of the original cost technique.

Needless to say, it is an argument that has not been settled yet, and is not likely to be settled in the immediate future of these inflationary days. But it was a repeated test of the strength and of the resilience of commission regulation as an institution. It survived because after each storm there was evaluation of arguments

Constructive and Destructive Criticism

"No one asserts that commission regulation has been so perfect in all respects as to be beyond criticism. The commissioners themselves would agree to that. But criticism of believed defects is quite different from the sweeping assertion that the whole thing is a failure and ought to be abolished in favor of 'yardstick' regulation or outright government ownership and operation."

and the adoption of reforms as needed. We cannot say even at this late date who is right and who is wrong about many of these questions and detailed situations. We only know that in the give-and-take of commission regulation our utility services have grown bigger and better and have come within the reach of far more people —common people—than anywhere else on the face of the globe.

It was the German philosopher Hegel who observed, somewhat cynically, that people and governments have never learned anything from history, nor acted on principles deduced from it. But comparing the present estate of regulation with its humble beginning, and its subsequent twists and turns, we have good reason to believe that regulation is here to stay. One of the very best reasons for its present general acceptance, perhaps, has been the opportunity it provides for continuous correction of past mistakes and for constant adjustments and revisions to offset changes in economic conditions from time to time.

This writer would like to believe that the quarter-century of steady publication of these developments by PUBLIC UTILITIES FORTNIGHTLY has played its part in this process of learning by better understanding. Certainly fair and full discussion as an aid to better understanding has had ample sway through the years in the pages of the FORTNIGHTLY. It has ranged from calm and detached analysis to vigorous charges and countercharges. But the net result over the long pull has been a thoughtful, many-sided presentation of

virtually every phase of regulation, controversial or otherwise.

REGULATION before the turn of the twentieth century was a poor and struggling thing, existing more in legal concept than actual administration. It had just passed through the direct *legislative* phase of statutory rate making which started with Munn *v.* Illinois and ended, for all practical purposes, with Smyth *v.* Ames in 1898.

The first quarter of the twentieth century, as already noted, witnessed the period of the establishment of the state commissions. And the federal courts, following the fair value doctrine laid down in Smyth *v.* Ames, seemed to be jealously watching over the shoulders of the fledgling commissions to see that they worked out their legal principles correctly within the pattern of Smyth *v.* Ames. As other writers have observed, this was the *judicial* phase of regulation. It was also the period of great physical growth of so many of our public service companies.

Then came the period of growing pains, on the eve of the great depression. The 1929 crash of the securities market was soon to reduce many of the holding companies to difficult financial positions and even receiverships. The state commissions were still weak and understaffed, with more responsibilities thrust upon them than they were equipped to handle with top efficiency. The demand for federal intervention, which was later to result in the Holding Company Act, the Federal Power Act, and the Federal Communications Act, had only reached the point of detached debate, soon to progress to the point of definite proposals for reform and statutory action.

THIS was the stage upon which PUBLIC UTILITIES FORTNIGHTLY emerged in 1929. What has happened since then surpassed in significance and activity all that had gone before. Reproduction cost as a measure of rate-making value began to go into eclipse. The Uniform System of Accounts was set up. The Hope decision in 1944 freed the commissions of all but a vestigial remnant of constitutional restraint on their rate-making discretion. It was the *administrative* phase. State commissions entered into an era of new responsibility. Their staffs got bigger and better appropriations. Occasional clashes but more often co-operation with federal commissions ensued. Strict adherence to original cost less depreciation became the predominant measure for rate making. Utility rates tumbled to record low levels in a succession of rate reduction orders.

World War II brought the period of emergency restrictions on some operations and plant expansion. Rate cases dropped off under the stratifying economic effect of general price fixing by the Office of Price Administration in the nonutility field. Then came the postwar inflation years still fresh in our memory and still with us. Unregulated commodity prices skyrocketed. So did the demands for utility services.

THE defense effort of the Korean war complicated and eventually aggravated the continued surge of inflation. Petitions for utility rate increases began slowly in 1946, first in the transit and telephone fields, then more rapidly as natural gas companies felt the pinch of rising costs. Once more utilities began to challenge the practicability of strict cost base measurements in a steep inflationary era. Some of

the state courts agreed. The argument still rages not only as to the rate base but also on the allied sectors of depreciation accruals for both rate-making and tax deduction purposes.

Lessons from the Past and Future Outlook

WHAT lasting lessons can we learn from all this, assuming, as an agreed premise, that regulation is here to stay—as an institution for maintaining the private enterprise system in the public utility business of this country? In the space of a single article, such as this, references to cases or particular articles in point can hardly be made. For a rough compromise, here is a bare recapitulation of what the past quarter-century seems to tell us:

1. That regulation, like the Constitution under which it functions, is a living thing. It cannot be locked off into any permanent formula. It must change as the economic system in which it operates changes. The good, sound practical regulation of one decade may not necessarily be the good, sound, practical regulation of another decade, and the U. S. Supreme Court has always wisely insisted upon reserving this elasticity.

2. That regulation needs support. That means support from the legislators in the form of sound, workable laws and adequate appropriations. It needs support from the regulated utilities themselves, most of which now recognize that regulation is the bulwark between them and socialization, because it is the only successful, workable alternative to socialization. Fortunately, the day of opposition and obstruction to commission regulation by the utilities themselves has been gone for some time. Most of all, it needs support from the public and that, in turn, means that it must be understood by the public. Selling regulation to the public is a job that is never finished and never will be finished. It is a constant challenge to those with the public interest at heart. It is in this field that continuous expository effort, such as the articles in PUBLIC UTILITIES FORTNIGHTLY, has a never-ending mission.

3. That regulation must be fair. It must be fair to the regulator and the regulated. If one were deliberately to set about destroying regulation, he could find no more effective method than to "load" the scales one way or the other. Abuse the ratepayer long enough and hard enough and public sentiment will explode in a demand for direct federal intervention, *à la* Europe or Latin America. Abuse the investor long enough and hard enough and you will accomplish the same end result by default. The investor will not invest. Service will falter and may even collapse. Public clamor will arise for the same old disillusioning but inevitable alternative—public ownership.

So much for very broad and generalized lessons which can be learned from the past quarter-century. What of the future?

If the past experience has taught us one thing, it is that the nation's economy is dynamic, never stands still. But the steady deterioration of the dollar over the past sixty-five years, with only rare and brief periods of increased purchasing power, shows us that inflation is more or less a normal trend over the long pull. Hence the strong possibility that courts and commissions will have to go on searching and reexamining established regulatory patterns,

such as those based on strict adherence to original cost standards. The "ghost of Smyth *v.* Ames" is still with us and likely to be for as far ahead as we can see.

Aside from this gradual or long pull inflation, another problem of the future for regulators may well be the new plateau of price levels which came upon us within the short span of the past decade. Court precedent may be very impressive, piled case on case in every circuit or judicial district in the land. But investors cannot eat court opinions and legal decisions are a poor substitute for dividends. It may well be that the commissions themselves may have to use the very liberty of action given them in the Hope Case to break with the past and strike out on new approaches to economic reality, if the utility services are to prosper indefinitely as private enterprises.

THE changing composition of the commissions themselves and the U. S. Supreme Court may bring new ideas, new thinking into the regulatory picture. It is not entirely inconceivable that Smyth *v.* Ames might be officially reinstated in whole or in part. After all, it was never overruled.

And if such changes do not happen soon enough, it may be that the legislatures, including the federal Congress, will have to pitch in and tune up the regulatory statutes once more to harmonize with greatly changed economic conditions. Maybe the evolutionary process already mentioned, which has taken regulation progressively through the legislative, judicial, and administrative phases, will have to turn full circle and put the corrective responsibility back on the lawmakers.

But whatever is necessary in the future, this much we know from the past: Commission regulation *can* be adjusted to fit the needs of the new conditions as they arise. This is more than can be said for the less flexible alternatives of socialized services or fiat regulation which, judging by experience abroad, can let service deteriorate to a point intolerable by our American standards. Trouble is with those foreign systems, public service is subordinated to political dictation without recourse. The utility, instead of being a servant of the public, is passed out on a dictated basis over which the customers have no voice. They must be satisfied with what they get.

SUMMING up, therefore, it would appear that whatever its occasional shortcomings might be, commission regulation has earned and merited the support of the American people and the American lawmakers. Hardly anyone today would seriously suggest getting rid of it, or trying something else to take over our public utility service field, as a whole.

It is hard to imagine any circumstances in the future which will change this picture very much. The situation seems to recall the famous witticism of the British humorist of World War I, Bruce Bairnfather: "If you know a better 'ole, 'op to it!"

Seventy-five Years of Electric Light

The year 1954 marks the seventy-fifth anniversary of Edison's incandescent light, which the electric industry will observe during the year as Light's Diamond Jubilee. It follows closely on the seventy-fifth anniversary of Alexander Graham Bell's telephone and the foundation of constitutional regulation of public utilities in the United States. Here is a review of the stirring events in the development of the electric utilities under regulation since the electric era dawned upon America three-quarters of a century ago.

By H. S. BENNION*

SEVENTY-FIVE years ago a 31-year-old man whose principal gifts were an extraordinary amount of curiosity, a prodigious memory, unusual persistence and imagination, and a conviction that almost anything was possible if one worked hard enough at it, was in the midst of a series of experiments and developments that came to fruition on a date in October of the next year which most of the world was to recognize as the natal day of the first commercially practical incandescent lamp.

Such a lamp, as this young man, Thomas Alva Edison, well appreciated, was the key to the development of a successful electric system which, contrary to popular

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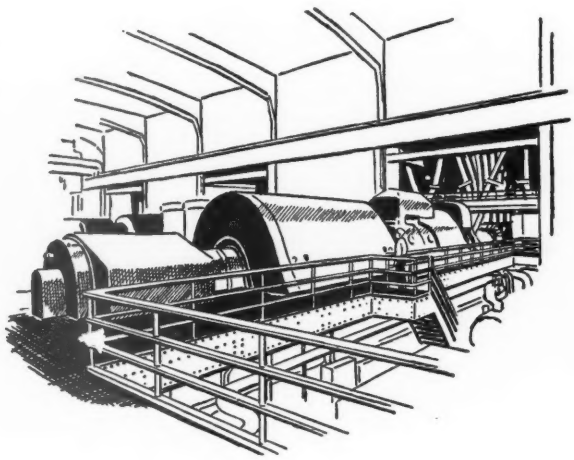

understandings, envisioned electric service for both light and power. "It doesn't matter if electricity is used for lighting or for power," he explained to a small group of businessmen who were willing to back him financially. "Small motors can be used day and night . . . Generally poorest district for light, best for power, thus evening up the whole city."

"Note the effect of this on investment," he emphasized cannily.

Edison's lamp was not the first incandescent lamp, but it was the first practical one. Nor was his the first electrical system —indeed, the first "lighting system" was registered under Gramme machine patents in London in 1875. In America, in San Francisco, in September, 1879, electricity was first offered for sale to the public. By the early eighties there were 50 or more separate "systems," mostly for arc lighting. The sizes of the generating plants were 5 to 20 kilowatts, until Edison built his Pearl street station in New York with 720 kilowatts of capacity. Only one "system" survives in the world today, that conceived and started by Edison, and now enriched beyond measure by the contributions of other pioneers on both sides of the Atlantic and by countless famed and nameless engineers, scientists, financiers, and men in many other walks of life who have nourished and contributed to its growth.

This year that event in the laboratory in Menlo Park, New Jersey, which signaled the beginning of the electrical era, will be commemorated throughout the country by the Diamond Jubilee of Light.

To attain realization of what has been achieved in the past seventy-five years through the agency, direct and indirect, of electric power—to see in all their significance the changes in the life of mankind which have become so much the fabric of today's civilization—it is necessary to recreate those other days and view in perspective the environment in which Americans lived, the world they accepted as being in the natural order of things.

On that day in 1879, when newspapers appeared on the streets with their announcement of Mr. Edison's accomplishments at Menlo Park, only fourteen years had passed since Lee offered his sword to Grant at Appomattox, as a pledge of a reunited nation. Rutherford B. Hayes, a Civil War Brigadier and three-time governor of Ohio, was chief executive of 38 states and 50,000,000 people. New York had passed the million mark in population and Chicago had just established its supremacy over St. Louis in the race for fourth place in population, but Spokane was a village of 350 and Seattle had only 3,000 people; Oklahoma City was in Indian territory where a census had not yet even been taken, and the plains of virtually uninhabited Montana were dark with thousands of buffalo. It was thirty years after the great gold rush and San Francisco was *the* metropolis of the West, with a quarter-million souls.

Colorado had been admitted to the Union only three years before, and the Dakotas, Montana, Washington, Idaho, Wyoming, Utah, Arizona, and New Mexico were not yet states.

Although the character of the country was still basically agricultural, with 14,000,000 people in the cities as compared with 36,000,000 in rural areas, the nation of farmers, artisans, and small-scale businessmen, who transported their goods by wagons, river steamers, or canal boats,

was gradually being replaced by an America which still had millions of farmers but was more and more characterized by crowded, industrialized cities, capitalists and big businessmen, great factories and far-flung railroads.

The factory system had received great stimulus during the Civil War with the demand for woolens, munitions, etc. The need for food, combined with the scarcity of labor, trebled the output of farm machinery. The demand for manufactured products continued to expand after the war, stimulated by westward expansion, the rehabilitation of the South, and the increased population, which jumped from 17,000,000 in 1840 to 50,000,000 in 1880.

This jump in population was due in great part to the tides of immigration surging over the Atlantic, as countless families sought the haven of opportunity which the United States offered. The symbol of their hopes, the Statue of Liberty, had not yet been erected in New York harbor, but the arm of the projected statue was on exhibition in Madison Square, where it drew crowds of curious and impressed citizens.

My four grandparents were among the emigrants of that period. They found America a veritable land of opportunity. It was easy to go broke, but not too difficult to start again. It was no place for a soft or lazy man. They were on their own and the land and the elements yielded up a living only after a struggle; but there were no regulations of bureaus, agencies, and commissions to be complied with; no hearings and investigations, no permission required; no federal taxes to pay. It was freedom without any strings.

One of my grandfathers with his two brothers from the Midlands of Scotland loaded their goods in donkey carts to reach Glasgow where they boarded a boat that took them to New Orleans in six weeks. They went to St. Louis by steamboat where they worked to earn teams and wagons, later starting from St. Joseph across the plains to Utah. Their first winter was spent in dugouts with little to eat because of famine. In a few months they were able, however, to begin freighting operations from St. Joe, Missouri, to Salt Lake, to Butte, Montana, their freighting business taking them also to Los Angeles and San Diego. Later they were contractors building the Western Union telegraph line from Salt Lake west across the desert and subcontractors under Brigham Young in building the Union Pacific Railroad through the Wasatch Mountains to Ogden and westward to Promontory Point (where the last spike made of California gold was driven in 1869 upon completion

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of the nation's first transcontinental railroad).

THE spirit of invention was in the air. Fourteen thousand patents were issued in 1880, while only 459 had been granted forty years earlier. On the verge of creating whole new industries to produce them, prototypes were appearing of such wonders as the self-binding reaper and innumerable other improvements in agricultural machinery, the typewriter, new typesetting and printing machinery, railway air brake, and the refrigerator car.

From 1849 to 1879 the number of manufacturing establishments had doubled, the number of wage earners increased from 957,000 to almost 3,000,000, and the value of products multiplied more than five times. The value of total manufactures had risen in twenty years from $1,970,000,000 or $62 per capita in 1860 to $5,560,000,000 or $110 per capita in 1880. From 1840 to 1880 the number of cities with a population of between 5,000 and 10,000 inhabitants increased from 48 to 249, and the total urban population from less than 2,000,000 to over 14,000,000.

As a key industry in this industrial advance, steel showed phenomenal growth from 1860 to 1880. The Bessemer process made possible the manufacture of steel in half an hour where it had formerly taken three months, and in the 1870's a dozen works were founded, with these results for the iron and steel industry: capitalization rose from $23,000,000 to $230,000,000; value of product from $36,000,000 to $296,000,000; and number of employees from 22,000 to 141,000.

This period, in what has been called the Industrial Revolution, perhaps unavoidably carried with it onerous working conditions for many. Long hours, from before sunrise until after sunset, six days a week, unsanitary conditions of work, factory rules that now seem unreasonable, and what now would appear to be exploitation of women and children, were common. Electricity had not lifted the heavier burdens from the backs of workers.

COMMON laborers earned less than $10 a week and a skilled man received less than $20 when he was lucky enough to have work. Women rarely earned as much as a dollar a day, and city sweatshop workers were paid so little that many were forced to bring work home so that the entire family could help eke out the weekly income. Around 1880, the wages in New York flax and hemp spinning mills were 40 cents per day for children, 85 cents for a woman card feeder, $1 for women spinners, and $3 for men overseers. In the cotton mills salaries ranged from $4.50 a week for women frame spinners to $9 for the girl weavers who operated the looms. Yet the people flocked to the factories of America. Obviously, they offered better living and working conditions and better opportunities than the workers had previously experienced. The abundant supply of labor compared with the market for goods and the unavailability at that time of power-driven tools to increase productivity held down the rates of pay.

Average weekly salaries in New York included $5 to $8 for bakers and $6 to $9 for laborers and porters; $10 and more for blacksmiths, painters, plasterers, tailors, and tinsmiths. Bookbinders, bricklayers, plumbers, and shoemakers were among the best-paid trades, drawing anywhere from $12 to $18 a week. Although these wages seem small and were sometimes well below

Edison Stepped up Electric Aid Advent

"THERE can be little doubt that the blessings of electricity and electric service would have come to the world, later most certainly and in not the same manner, most likely, if Edison had never lived. But he did live, and not only did he make vast contributions to the material life of our times and times to come, but his life, and character, will stand as an example for future generations."

the income necessary to maintain a decent standard of living, the average yearly earnings of the 1880 American workman, $345 or $1.11 a day, were double the annual wages earned in Europe at the same time. And, much more important, such wages were received in an era when a dollar spent for services and goods generally brought enormous values compared with its purchasing power today.

IN 1882 the *New York Daily Tribune* could advertise unlaundered shirts with reinforced linen bosoms and bands and fully finished for 39 cents. A pound of roast beef was 12 to 16 cents in New York city; pound of bread, 4 cents; pound of flour, 3 or 4 cents; pound of sugar or quart of milk, 8 or 10 cents. Food prices in other parts of the country were even lower. For instance, roast beef in Chicago could be bought for 8 cents a pound and milk for 3 cents a quart. Other expenses in the family budget might include $3 to $5 for a ton of coal or $10 to $12 for a suit for the head of the family.

Farming in 1879 was one of the most grueling and worst-paid occupations in the country. Working hours extended from sunup to sundown, and left the farmer little time for anything but the sheer physical labor required to wrest a bare living from the soil. Until the 1860's methods and tools were as primitive as those used hundreds of years before. The ground was worked with plows little better than the plows of the ancient Egyptians, grain was separated from the straw by a hand flail.

Such problems as water and fencing plagued the prairie farmer. Windmills were used to pump needed water from the ground by small farmers, dairymen, and cattlemen, and there were towns in Texas, Kansas, and Nebraska where almost every house had a windmill. Timber and stone fences, laboriously constructed, were being replaced with barbed wire, which was shipped west by the train load.

DURING the last half of the nineteenth century many mechanical devices for sowing, harvesting, and reaping began to appear. The chilled-steel plow was invented in 1869, only ten years before the electric light. The McCormick reaper, which began to come into use in the sixties, cut the grain, raked off the straw, and almost doubled the amount of wheat which could be harvested in a given time. A variety of other timesaving machinery for the farm gradually developed, and only the year before the momentous announcement from Menlo Park, John Appleby invented a twine binder to replace the unsatisfactory wire binders in use and increased speed eightfold. In the 1880's the mechanical thresher became a community institution, as professional threshing crews went the rounds from farm to farm.

Rural elements felt last and least the revolutionary changes affecting American life. In spite of the rising improvements in farm machinery, and the fact that the village store and mail-order house supplied the farmer with many commodities heretofore manufactured on the farm, the pattern of farm life continued in much the same way.

Low prices, poor markets, and the inevitable mortgage plagued the farmer during periodic hard times. Bad weather served to aggravate isolation—blizzards in winter, mud in spring and autumn. There were few schools, no hard roads, autos, or telephones to permit neighborly calls or to summon help in an emergency. Books and newspapers were few.

THE generalization which compares the present unfavorably with the past would scarcely be accepted by the housewife of 1879. Activities in the home were generally bounded by sunrise and sunset, but during those hours her lot was hard physical labor. All those household activities which are today performed easily and quickly with the help of electric appliances required infinite time and effort. On Monday "wash day," which sometimes began as early as four o'clock in the morning, the housewife might perform innumerable tasks—pumping every drop of water used and carrying it in buckets to the kitchen, heating it on a stove which had first to be stoked with wood or coal, scrubbing and wringing the clothes by hand, and joining in a friendly race with the neighbors to be the first to hang the wash on the clothesline.

The elaborate clothes of the era, with their ruffles and flounces, were made and mended on clumsy sewing machines and ironed with heavy flatirons heated on the kitchen stove. All breads and pastries were prepared in the home—the housewife who relied too much on "baker's bread" was suspected of possessing little industry or pride in her calling—and this involved more bringing in of wood and coals, striking fires, and carrying out ashes. This was hard on the housewife but good fortune for the rest of the family. On the weekly cleaning day every rug was swept with a broom, with an attendant cloud of dust

settling on furniture and housewife alike; kitchen floors and porches were scrubbed, usually by hand, and the cast-iron stoves were polished.

Appliances such as the steam cooker, double boiler, Dover egg beater, gas toaster, and asbestos stove mat eventually invaded the kitchen, and schools were organized to help the housewife learn cooking over again with the new appliances, but it was not until the nineties that light, easily handled aluminum ware became a boon to the housewife. Progress in manufacture and transportation, especially after 1870, encouraged more variety in the family menu with such delicacies as Alaskan salmon, lemons and oranges from California, and canned goods from factories.

An urban housewife of 1879 might well have been concerned about such matters as traffic congestion, water famines, fire hazards, and the growth of slums. Water purification was not begun until the 1880's. Although the volunteer fire departments were matters of great community pride and rivalry, the devastating fires of 1871 in Chicago and 1872 in Boston led to the organization of paid fire departments. Large tenement walk-ups of half a dozen stories, with small rooms and narrow shafts for light and air, crowded with hundreds of people, sometimes with more than one family to a room, became both an economic and social problem.

Almost every city had one or more lines of horsecars, sometimes badly painted and in various stages of disrepair and pulled by animals often in poor physical condition. Lighted at night by tiny oil lamps, they traversed streets illuminated by flickering gas lamps. In winter shivering passengers warmed themselves by thrusting their legs into heaps of straw piled on the floor.

While electricity has brought the means of producing more and of having more, and we rejoice in this better fortune, we are mistaken if we conclude that all was unhappiness prior to the electric era. Satisfaction with one's lot in life depends in relatively small part on absolute material well-being. It depends much more on how our possessions compare with those of others and also upon what we have once tasted and learned to want. When we come into the world we take everything we find here for granted and are not disappointed because of the things we do not find.

The electric lamp came on the American stage ten years before my unnoticed entry and my impressions of life before the dawn of electric power are all based on stories told me by my elders. They told their stories well or my imagination gave them a golden tinge. Hence, my sentiments

dim my judgment and a feeling of nostalgia dominates me whenever that era is brought to my mind.

ENTERTAINMENTS were few and homemade, but the capacity to enjoy them was great. Families would take turns giving a dance at their home. There would be one, possibly two fiddlers. The neighbors would drive over by team, coming 10 to 25 miles. The dance would last all night. Small children would be put to bed. Others would join the grownups. A supply of good food would more than meet the needs, and after a hearty breakfast at sunrise the teams would be hitched up and the party would disperse.

Yet the evidence shows beyond question that in material ways of life—comfort, convenience, leisure, opportunities for culture and advancement—and in health and longevity, these days are far better. Of the physical man, the mortality tables and the vital statistics bear evidence. In 1879, the median life expectancy was less than forty-five years. In 1950, it has reached a median of sixty-eight.

There can be little doubt that the blessings of electricity and electric service would have come to the world, later most certainly and in not the same manner, most likely, if Edison had never lived. But he did live, and not only did he make vast contributions to the material life of our times and times to come, but his life, and character, will stand as an example for future generations.

By the time of his death at the age of eighty-four, in 1931, electricity had become so much a part of the life of the world that Congressman Vreeland of New Jersey, some years later in a memorial address to Congress, was moved to say:

Suppose, if you will, that the good men do dies with them, and that it is nearly half past three in the morning on October 18, 1931. Suddenly, as we lose the physical genius of Thomas Alva Edison, the entire world is robbed of its electric power. Whole cities are plunged into darkness. Transit lines are at a complete standstill. Radios, telephones, and the telegraph are unable to function. Communication has received a tremendous setback.

The eighteenth of October dawns on a different world. Men in cities either walk to work or go by horse and buggy, for storage batteries have failed completely and countless thousands of automobiles, subways, and airplanes are electrical cripples. In the tall city buildings elevators are no longer running. Factories lack the power to operate. Electric appliances in the home are reduced to the status of ornaments. In the rural districts men on modern, electrically equipped farms are forced to return to the harvesting methods of their grandfathers. By nightfall panic has seized the world. Every division of industry has been victimized. The United States and all the world about us are paralyzed. People seeking solace in entertainment find the phonograph silent and motion pictures nothing but a memory. In hundreds of ways the progress of civilization has been robbed of the accomplishments of half a century.

IF a housewife of 1879 could be transported directly into the electrically equipped home of today, her wonder and awe would be something to behold. She could bear eloquent witness to the daily hours of exhausting physical toil eliminated by electrically pumped water, by the washing machine, the vacuum cleaner, the electric stove, the sewing machine. She

The Vanishing Work Horse

"A CENTURY ago, according to Secretary of Agriculture Ezra Taft Benson, 79 per cent of the total energy used for work was supplied by animals, 15 per cent by human beings, and only 6 per cent by machines. By 1960, it is estimated that animals will supply only one per cent of our work energy, humans only 3 per cent, and machines 96 per cent."

could testify what electric refrigeration could mean to the health and well-being of her family, and praise the convenience of electric lighting. What she might think of radio and television is hard to imagine.

Her husband, the impress of belt-driven machinery, long hours, and gloomy dark factories strong in his mind, would be thunderstruck by the electrically driven production lines of today, in clean, well-lit buildings, and by the amount of work turned out and the amount of wages made possible for him. What would he see today?

In 1879, he would have been one of 2,700,000 production workers, with total wages of about $948,000,000, whose labor added manufacturing value of just under $2 billion; his year's wages $351.

In 1950, 11,800,000 production workers received total wages amounting to over $34.5 billion, and value added by manufacture was over $89.5 billion. So in the electrified year of 1950, less than five times the number of workers increased manufacturing value 45 times, and their total wages were 36 times the 1879 total.

THE 1899 manufacturing worker produced an average of $720 of value added by manufacture and the 1950 worker averaged $7,600 per year.

If our worker had been in a manufacturing plant in 1900, before the electrical revolution gained momentum, he probably was earning about $9 for a 54½-hour workweek.

At the turn of the century, in 1902, only about 1.3 billion kilowatt-hours annually were used in manufacturing. By mid-1953, however, when the annual power consumption for manufacturing was 168 times the early figure—about 214 billion kilowatt-hours—the manufacturing worker was averaging nearly $65 for a 41-hour week—over seven times the wages of 1900, for a workweek shorter by one-fourth.

A century ago, according to Secretary of Agriculture Ezra Taft Benson, 79 per cent of the total energy used for work was supplied by animals, 15 per cent by human beings, and only 6 per cent by machines. By 1960, it is estimated that animals will supply only one per cent of our work energy, humans only 3 per cent, and machines 96 per cent.

From 1899 to 1941 productivity per man-hour rose at the rate of 3 per cent annually, compounded. It stood still during the war years of 1941 to 1946 and resumed its upward trend at the rate of approximately 4 per cent for 1947 through 1950, then dropping 2 per cent for 1951 and one per cent for 1952.

Horsepower per worker engaged in manufacturing in 1899 was two and one-tenth of which one-tenth horsepower was in electric motors. By 1902 the electrical horsepower alone had risen to about two-tenths horsepower per wage earner and each wage earner used an average of 260 kilowatt-hours per year. In 1951 the average annual use had increased to over 14,000 kilowatt-hours.

Translated into man-power output, the 1899 worker had the electrical equivalent of two helpers while the 1951 worker had the equivalent energy of 210 men working with him on his job all year long.

Electricity's greatest contribution to industry has been in the fields of improved mechanization, automatic controls, and continuous process production, making possible mass production on an assembly line basis. Improved mechanization reduced manual operation, but left operators still mainly responsible for guiding the operation of the machine. Automatic controls allow a sequence of operations to be performed under the guidance of a control system. A line of individual machines coordinated to function in tandem as a single machine in a continuous process, or a single machine with many elements may perform a series of operations as the product passes through.

This graphic example of efficiency and productivity to which electric power has contributed unmeasurably does not cause the workman to fear technological unemployment. On the contrary, both he and his employer can be amazed at the number of new employment and business opportunities, new products, new methods which owe their existence either directly to Edison, or indirectly to the versatile power supply system he developed.

It has been said that electricity resparked the Industrial Revolution. Certainly a wave of new inventions and industries followed, after the immense potential of the new source of energy was recognized. The mass production of airplanes, automobiles, trucks, and appliances which in themselves use electricity could not have come about without electric power. Steel, copper, aluminum, and other basic metals and alloys have been able to multiply their contributions to civilization immeasurably because electricity has been applied, both in the manufacture of the

metals themselves and in the fabrication of finished metal products. Modern food packaging, preserving, canning, and freezing, with all the significance such processes hold for the health and well-being of the American people, rely heavily on electricity. And in the fields of science and medicine, there are electronic applications of many kinds, whose value to human history we cannot assess at this stage.

ANOTHER change in manufacturing facilitated by electricity is the growing practice on the part of large manufacturing corporations to establish branch factories in several different locations in the nation or even different locations in the same state. The cost of electricity purchased by the average manufacturing establishment in 1952 was about six-tenths of one per cent of the value of the finished product, and an ample supply of power could be had wherever working forces were available, thus helping manufacturers to place their branch factories and fix the size of each unit to achieve the most efficient production. The farmer of 1879, if he were to be transplanted to a modern farmstead, might have the most stunning experience of all.

The electrical age which sprang in all its complexity from that fragile, lighted globe of 1879 has given man his invaluable opportunity to realize in himself those qualities of mind, intellect, understanding, and spirit which distinguish him from the other creatures of the earth. No longer does he have to devote his day's waking hours and the years of his life to the wearing, physical effort once required for mere survival.

Electricity has made possible production which can satisfy his material needs and release to him many hours for whatever recreational or improving purpose he may wish. No longer need he feel confined by the four walls of his habitation and the day-to-day concerns of his life. He is more free to strive for higher purposes.

FUTURE prospects, challenging and dazzling as they are, have been opened to the world because nearly three-quarters of a century ago, Thomas Edison devised an electric system to supply a handful of customers with electric service.

From that beginning has grown the electric light and power industry, a phenomenon in its own right, whose development has been of amazing magnitude and rapidity. "Electric power output has been growing three times as fast as the average (growth) for all industries, or close to 10 per cent annually since 1900," the U. S. Department of Commerce recently reported.

At the time of Light's Golden Jubilee in 1929, Mr. Edison remarked, "I must

¶ "THE *electrical age which sprang in all its complexity from that fragile, lighted globe of 1879 has given man his invaluable opportunity to realize in himself those qualities of mind, intellect, understanding, and spirit which distinguish him from the other creatures of the earth. No longer does he have to devote his day's waking hours and the years of his life to the wearing, physical effort once required for mere survival.*"

confess that I never dreamed that from (the incandescent lamp) would come the stupendous electrical industry of today," and he expressed gratification that he had lived to "see the full fruit of our labors."

Perhaps the most spectacular measure of the industry's advance is found in the decade since World War II. In the span from 1945 to 1955, the electric industry will have more than doubled its generating capacity from 50,000,000 kilowatts to about 115,000,000. The electric company descendants of that first system are installing by far the greater part of the new capacity, and will have spent about $20 billion on new construction. This is $7.5 billion more than their entire investment in electric plant and equipment at the end of 1945, which was achieved after more than six decades of progress.

The electric companies have grown in other ways, too. In keeping with the steadily increasing importance of electricity in every phase of human endeavor and well-being, the companies which supply this vital energy are more than ever integrating and identifying themselves with the life, aspirations, and economy of the people in the areas served.

THE electric company is a unique business enterprise in that it must prosper or fail with the community—it has no other place to operate. Consequently, electric company interest in community welfare does not represent idle or ill-considered altruism, but is based on the sound realization that the company's own success depends on the progress and development of its customers. And this, at today's level of electrical advance, means everyone in the company's service area.

The harnessing of great forces, whether it be electricity or the energy of the atom, brings great opportunities to mankind. Electricity already has lengthened the hours of plentiful light, has brought relative abundance of many kinds of goods, has multiplied the hours of leisure and entertainment, and it has given us a glimpse of the vast quantities of additional food, shelter, clothing, and other services, which through the further teamwork of science, engineering, common sense, hard work, business incentive, and sound society and government, it can help to bring to America. But great forces which can be applied to beneficial ends can also be turned to destructive, corrosive, and enfeebling ends. With physical power multiplied profusely, the virtues of human character are correspondingly multiplied in their importance to society. Conversely, the evil tendencies of humanity become a much greater threat to the survival of sound and happy civilization and even of life itself.

THEREFORE, let every American, and especially every American man of business, be dominated always by a humble appreciation that he holds vast power in trust, a stewardship to be used constantly for the good of his fellowmen; that his own usefulness and happiness depend upon it, and let him always be guarded against any impulses, suggestions, or pressure to abuse this vast power, for to do so will surely end in the destruction of the things he cherishes. As the volume of power and the importance of its uses mount rapidly in the years ahead, these principles of life gain proportionately in importance to the preservation of our American way of life.

H. Lester Hooker—Sixty Minuteman

The Virginia commission is a little more than double the age of PUBLIC UTILITIES FORTNIGHTLY. *The head of this commission, and a member for the past twenty-nine years, is H. Lester Hooker, in point of service the dean of state commissioners in the United States. He is well qualified by experience and reputation to comment on the developments in regulation over recent decades and what they mean from the standpoint of a working commission.*

BY JAMES J. KILPATRICK*

FROM the ninth floor of the State Office building in Richmond, where Virginia's corporation commission holds forth, a husky, grizzled states' righter, grown old in the business of utility regulation, commands quite a view of the countryside.

Through the big windows that look to the east, Judge H. Lester Hooker can see the spire of St. John's Church; it was there that Patrick Henry set the torch of liberty to burning. In the commission's courtroom, a few doors away, the windows look down on a state capitol that Jefferson designed. To the south, Judge Hooker sees the James river, almost empty now of commerce, winding toward the sea. In the busy streets below are half a dozen banks, scores of insurance offices, small loan companies, and securities dealers by the dozens; in near-by Shockoe valley, trains of the C. & O. Railway come and go; Lee bridge carries a stream of trucks and busses along Route 1; overhead, passing airplanes attract the meditative eye.

AND all of these, in one fashion or another, figure in the day-by-day life of Virginia's Lester Hooker. In the field of public utility regulation, he is the old war

*Editor, *The Richmond News Leader*. For additional personal note, see "Pages with the Editors."

horse—the sixty minuteman. In terms of continuous service on the bench, he ranks at sixty-eight as dean of American utility commissioners. Only two others — Georgia's James A. Perry, whose career dates from 1911, and Georgia's Walter R. McDonald, whose service began in 1923—antedate Judge Hooker in the field, and both of the Georgians were out of office for a couple of years in the early 1930's. Since November 24, 1924, Judge Hooker has been doing business at the same old stand.

That the business has changed a good deal in this period is not surprising; most businesses have changed. But the changes in public utility regulation by the states over the past quarter-century have been of far-reaching importance; and, pleasantly enough, the process of change is still going on. Judge Hooker feels that these changes, in general, may be lumped under three headings—the growing effectiveness of state regulation, the expanding functions of state utility commissions, and the changing attitude of the utilities themselves.

By way of background, it may be recalled briefly that state utility commissions, as they are known today, grew out of the public transportation and railroad commissions of a century ago. William E. Mosher traced their beginnings to Rhode Island in 1836, New Hampshire in 1844, Connecticut in 1853, and Vermont in 1855, but these early commissions were mostly fact-finding agencies, with little power of actual regulation.

Following the famed Munn decision of 1877,[1] which established the broad principles of public regulation of public service corporations, the states began to play a more active rôle. By 1887, when the Interstate Commerce Commission was established, 25 states had commissions with some degree of regulatory authority (mostly over railroads), and by the turn of the century the stage was set for a mushroom expansion in the field of utility regulation.

In Virginia, delegates to a state constitutional convention recognized the need and the opportunity, and nailed into Article XII of Virginia's Constitution of 1902 the basic provisions by which corporations are regulated in the Old Dominion to this day. Pursuant to constitutional mandate. Viirginia's state corporation commission came into being in 1903, and a host of transportation and transmission companies found themselves subject to detailed public regulation.

Other states followed suit. Wisconsin and New York set up commissions in 1907 with wide powers; in the same year, Georgia expanded the duties of its old railroad commission. Vermont joined the movement in 1908, and New Jersey in 1910; half a dozen others came along in 1911—New Hampshire, Kansas, Ohio, Washington, Connecticut, and Nevada. Rhode Island, Oregon, and California established commissions in 1912, and Indiana, Illinois, Colorado, Missouri, Montana, Idaho, Pennsylvania, and West Virginia in 1913. By the time Judge Hooker came on the scene, state commissions almost blanketed the country.[2]

But in general, the Virginia jurist recalls, they weren't very good commissions

[1] Munn *v.* Illinois, 94 US 113.

[2] Delaware alone held out, but since 1949, when Delaware set up its public service commission, all of the 48 states have had regulatory bodies.

—or, more accurately, they weren't very effective commissions. A number of factors contributed to this condition. William A. Roberts, speaking before the American Society of Municipal Engineers in Rochester in 1934, put his finger on one of the causes.

Discussing this period, Mr. Roberts (he was then people's counsel to the public service commission of the District of Columbia) remarked bluntly that in the 1920's "many public utilities commissioners were poorly qualified, ineffective political jobholders."

FOR the most part, utility commissioners were named at the polls by popular election; the test was not the depth of their knowledge, but rather the scope of their popularity. The positions, with a few exceptions, were poorly paid; commission staffs, to put it mildly, were sketchy; few of the state agencies had appropriations sufficient for the work at hand. Mr. Justice Sanford, in the Attleboro Case of 1927,[3] offered a pungent observation on the pitiful showing made by state commissions in attempting to regulate the great utility networks of that day: "As well set a lap dog to hold a grizzly bear in restraint as to expect that the puny efforts of a single commonwealth shall not be outmatched by the power and prestige of a combination extending over 20 or more states."

BUT if the obstacles of partisan politics, insufficient staffs, and inadequate appropriations were not enough, the state commissions of a quarter of a century ago faced other difficulties also: There was no uniformity among the states in the powers they could exercise; the holding company structures of the day frequently made it impossible for a state agency to get at a problem effectively, even if it had the requisite authority; courts could not agree on ground rules for rate regulation; accounting procedures were hopelessly inconsistent. Ben W. Lewis of Oberlin College, a sharp-tongued critic of the state commissions, expressed the opinion, in a talk before the American Economic Association in 1946 that, at the close of the twenties, "State regulation was in the doldrums."

It would be pleasant to report that all of this has changed during the quarter-century that PUBLIC UTILITIES FORTNIGHTLY has been covering the scene. It would be pleasant, but it wouldn't be true. State regulation, as Lester Hooker is the first to emphasize, is far from perfect today.

Yet some improvements have been spectacular.

[3] Public Utilities Commission *v.* Attleboro Steam & Electric Co. 273 US 83, PUR1927B 348.

¶ "WHEN *a commissioner's desk is piled with bus certificates, charter amendments, fire code violations, insurance tables, and petitions for the refund of gasoline taxes to truckers, not much time is left for pondering the merits of 'reproduction cost, depreciated'* VERSUS *'prudent investment.' The steady growth of investigative staffs, however, is helping to relieve this problem of the entangling detail.*"

MORE and more, a pattern is becoming evident by which utility commissioners are appointed by the state executive, subject to confirmation by state legislative chambers; popular election still obtains in only a dozen states. Little by little, salaries have been increased, so that service on a state public service commission holds out an attractive income for genuinely qualified men. (It still is true, however, that in some states the pay scale for commissioners and their staffs remains so low that first-class engineers and accountants cannot be retained.) Staffs have been increased—the California and New York commissions have staffs in excess of 500 each, and Virginia's commission has grown from a staff of 30 in 1928 to a staff of more than 200 today—and legislatures have shown a more sympathetic disposition toward appropriating sufficient funds for state regulatory bodies to do the work assigned them. Over the past twenty-five years, thanks in large measure to the devoted labors of the National Association of Railroad and Utilities Commissioners, uniform systems of accounting have been adopted in three-fourths of the states.

"The whole picture of state regulation is tremendously improved," says Judge Hooker simply. "It used to be, twenty-five years ago, that a few of us would get together at NARUC meetings and agree that here or there was a good commission, doing a good job; today it's reversed—here or there is a weak commission, doing a poor job. From a national standpoint, the story is extremely encouraging."

WHAT sort of work do the state commissions do? A shorter answer might be supplied, Judge Hooker suggests, if the question were, "What sort of work don't they do?" Since the early days of railroad regulation, the authority of state utility commissions has spread into an astonishing number of fields — though, oddly enough, railroad regulation, which is what they started with, now is among the least of their duties.

VIRGINIA'S corporation commission, which is believed to be unique in the wide scope of its duties, may offer an indication of the varied assignments imposed upon the state utility commissioner. Judge Hooker and his two colleagues are responsible, first off, for issuing all charters in Virginia (about 1,600 this year), and for handling the annual reports of some 20,000 corporations domesticated in Virginia. The commission supervises the operations, defines the territories, and fixes the rates of electric power companies, and telephone and telegraph companies.

In the field of transportation, it looks after intrastate railroad operations. It grants certificates for bus and truck routes, regulates carriers of household goods and explosives, and governs the liability of taxicabs. It fixes the fees charged by seagoing pilots for bringing ships into Hampton Roads. A division of aeronautics holds wide authority over the licensing of pilots and aircraft and the approval of landing fields. The commission issues certificates of convenience and necessity for intrastate airlines.

Through its bureau of insurance, the commission fixes rates on all risks but life and title insurance. The bureau of banking examines banks, savings and loan companies, industrial loan companies, small loan companies, building and loan associations, and credit unions. A securities division has administered a tight Blue

Self-starting Regulation

"EXPERIENCE *has demonstrated that when state commissions get too judicial, and simply wait for cases to be tried before them, the public interest is not well served. Where the commissions themselves instigate rate proceedings, conduct their own searching examinations of the evidence, and maintain a firm and vigorous control, public confidence results.*"

Sky Law since 1918. The state fire marshal, appointed by the commission, administers an elaborate Fire Hazards Law. The commission handles hospitalization contracts, files financial statements of fund-raising charities, assesses the property of public service corporations for local taxation, and watches over the operations of gas and water companies. At one time the commission was charged with fixing the fees that could be charged by lime-grinding plants, but the commissioners got out of that one: They declared the law unconstitutional.

SOME of these functions are of long standing in Virginia (the bureau of insurance dates to 1906, the bureau of banking to 1910), but it is surprising how many of them—for example, the regulation of REA co-operatives—have been dropped in the commission's lap in the past twenty-five years.

The same rapid expansion of duties has been observed in other states.

For a time, it appeared that the state commissions, instead of expanding, gradually would shrink into an impotent status, mere eunuchs to a federal harem. During a decade which witnessed the creation and development of the TVA, the SEC, the FCC, and the reconstituted and greatly reinforced FPC, there were a good many Jeremiahs who felt that commission regulation at the state level had reached the end of its rope. As events proved, the efficiency of federal regulation served merely to stimulate the states to greater efforts of their own.

THE threat of strangulation by federal expansion was posed most clearly, Judge Hooker recalls, in the bitter legislative battle that preceded enactment of the Public Utilities Act of 1935. As a member of the NARUC Legislative Committee, Judge Hooker played a key rôle in obtaining the so-called Woodrum amendment (sponsored by the judge's close personal friend, the late Clifton A. Woodrum, Representative from the Sixth Virginia District), which guaranteed that no regu-

latory authority then held by the state commissions would be taken from them.

"We might not have gotten it at that," Judge Hooker observed the other day, "if it hadn't come up raining one day in March or April, 1935, when the Wheeler-Rayburn Bill was pending. I was stuck all day in the Hotel Raleigh, with nothing to read but that bill. I'd read it before, of course, but never line by line and word by word. By the time the rain stopped, I saw that under the bill the FPC would have the power companies right where the ICC had the railroads. In the field of electric utility regulation, the state commissions might just as well have closed up shop. So I called Cliff Woodrum, and we fixed up this amendment. I remember that the late Frank R. McNinch (then chairman of the Federal Power Commission) hollered that I was trying to emasculate his bill. He was exactly right."

AFTER that donnybrook, the state commissions dug in for a stout defense of their authority, and they've been defending states' rights ever since. Judge Hooker is hopeful, in this connection, that 1954 will see enactment of the Hinshaw Bill, by which state commissions would take over regulation of intrastate operations in the field of natural gas.

"We regard the purchase, transmission, and sale of natural gas for ultimate use within the same state as a local function," said Judge Hooker in testifying before the House Commerce Committee last June, "and we believe that all aspects of such transactions should be regulated locally . . . Regardless of how capable and efficient the Federal Power Commission may be in its regulation of the rates and facilities of these transmission companies, because of our proximity to them we firmly believe we are in a better position to regulate all of their affairs."

It perhaps should be emphasized that Judge Hooker, staunch as he is in defending state prerogatives, bears no ill will toward the federal regulatory agencies. Through the co-operative efforts of the NARUC, of which Judge Hooker is a past president, much of the early animosity has been erased. His position is simply that he believes there is a place for both federal and state regulation, and he wants each to preserve its own field of operations without encroaching on the other.

IN the same period that the functions of the state commissions have been changing so markedly, Judge Hooker also has observed a decided change in the attitude of the public service corporations subject to state regulation.

"It is perfectly true," he recalls, "that a feeling of 'the public be damned' persisted right into the 1920's on the part of many utilities. The approach then, in many quarters, was to get while the getting was good. The abuses of that period contributed to the rapid rise of an entire new philosophy of regulation during the early years of the Roosevelt administrations, and the utilities had no one but themselves to blame."

Today, Judge Hooker feels the utilities "are developing a real desire for good public relations." In Virginia, this was evidenced (in a less inflationary day) by a series of voluntary rate reductions negotiated by the corporation commission in the public's behalf. The feeling still is being evidenced today in the anxiety of public service corporations to present their cases in such a fashion that the public will feel

all relevant information has been brought forth.

Though utilities at one time were bitterly opposed to extensive state regulation, virtually all of them now approve of it and many actively assist the state agencies in obtaining from their legislatures the funds needed for effective work. It may be, Judge Hooker wryly admits, that the utilities simply prefer to be regulated by the states instead of by the federal government, but whatever the cause the relationship is, on the whole, a satisfactory one.

THE state utility commissions, Judge Hooker feels, have a long way yet to go. Because of the enormous amount of detailed duty dumped upon them in different fields, commission members have little time for calm and reflective thinking on major policies—for example, on the ancient problems of utility rate regulation. When a commissioner's desk is piled with bus certificates, charter amendments, fire code violations, insurance tables, and petitions for the refund of gasoline taxes to truckers, not much time is left for pondering the merits of "reproduction cost, depreciated" *versus* "prudent investment." The steady growth of investigative staffs, however, is helping to relieve this problem of the entangling detail.

Little by little, the state commissions also are gaining more uniform powers. The state commissions in five states (Iowa, Minnesota, Mississippi, Nebraska, and South Dakota) still lack authority to regulate gas and electric rates at a state level, and the Texas commission cannot regulate electricity at the state level. In general, however, the trend is toward more consistent responsibilities.

ONE problem, going to the nature of the commissions themselves, still lacks a satisfactory answer: Are the commissions legislative, or judicial, or administrative? The answer, of course, is that they are all three, and sometimes all three at once. (Judge Ralph Catterall, Judge Hooker's urbane and scholarly colleague on the Virginia commission, once mused upon a plan for hoisting signal flags above the commission's bench—a green flag to indicate that "we are now sitting legislatively," a blue flag to signify that "we are now sitting judicially," and so forth. Nothing ever came of it.)

The problem arises in most curious fashion when a major rate case comes along, whether by application of a utility

¶ "FOR *a time, it appeared that the state commissions, instead of expanding, gradually would shrink into an impotent status, mere eunuchs to a federal harem. During a decade which witnessed the creation and development of the TVA, the SEC, the FCC, and the reconstituted and greatly reinforced FPC, there were a good many Jeremiahs who felt that commission regulation at the state level had reached the end of its rope. As events proved, the efficiency of federal regulation served merely to stimulate the states to greater efforts of their own.*"

itself or by instigation of the Virginia commission. In any event, the commission conceives it as its duty to prepare what might be termed "the people's side." The commission employs expert consultants to challenge the utility's evidence; the commission works up what amounts to a case in opposition. Then the commission is compelled abruptly to step off stage, abandon the rôle of adversary and investigator, and re-enter in the rôle of judge; thereupon, in a quasi judicial capacity, the commission passes upon the admission of exhibits (including its own) and rules upon the objections of counsel to evidence. In theory, all such hearings are basically legislative in their nature, but the judicial atmosphere remains. Virginia's commission is a court of record, and the fact seems never to be forgotten.

THERE is a reason back of this paradoxical procedure, of course, and state commissions probably will continue to follow their dual rôle until some better system is devised. Individual consumers obviously lack the legal and financial resources to challenge and scrutinize the rate petitions of large utilities; unless the commissions themselves undertake their own critical investigations, no adverse testimony is likely to be adduced. Experience has demonstrated that when state commissions get too judicial, and simply wait for cases to be tried before them, the public interest is not well served. Where the commissions themselves instigate rate proceedings, conduct their own searching examinations of the evidence, and maintain a firm and vigorous control, public confidence results.

Such a feeling exists strongly in Virginia, where the state corporation commission is regarded as the people's own forum. That's the way Lester Hooker wants to keep it.

He and his colleagues believe that in proceedings before the commission, the humblest passenger on a bus or the smallest consumer of a great utility stands on an equal footing with the public service corporations. The passengers and the consumers know this, and they turn out in droves to speak up at major hearings. Unversed in legal niceties, these volunteer witnesses and amateur prosecutors can make hash of a record, and their appearances usually add up to a lot of unrewarding work.

BUT Lester Hooker thrives on the work. He is five times a grandfather now, and finds a few hours despite his duties at the Virginia commission to follow his beloved William and Mary Indians on the gridiron, and to keep up with the fortunes of the University of Richmond basketball team, which his son serves as coach. Summer months find him along the right field foul line in any baseball park he can reach of an evening. Regulatory work in the field of public utilities gets "more interesting all the time," and he's looking forward to the day when new enterprises in the public service and new forms of transportation will occupy the states' attention and present new challenges to the state public service commissions.

Should There Be Rules about Escalator Clauses?

During the recent inflationary years there has been a noticeable trend towards the adoption of escalator clauses as hedges in utility rate making. But can indiscriminate or excessive use of what should be a protective device, and not designed for raising revenue in itself, become self-defeating under some circumstances?

By PHILIP P. ARDERY*

As the country moves away from war economy, it seems time for the utilities to do a little soul searching respecting the hedges they've made against inflation. Though attempts to relate utility management to other businesses are ofttimes misleading, still there is enough basis for comparison to provide some valuable experience. And maybe present price trends of business can, with caution, be compared with utility rates, particularly in regard to escalation arrangements.

There is no doubt that we in America have left a seller's and arrived at a buyer's market. And even in the field of government-controlled monopoly, this simple fact has its effect. One of the results is an increased impatience with escalator clauses in gas and electric rates. At best such escalation forms a fair hedge against inflation and at worst it is pure obfuscation behind which a wary public suspects utility manipulation of the old "hidden ball" play.

Some indication of the purposes of escalator clauses—clauses which allow an electric or gas rate to vary depending upon the amount the utility pays for fuel, allowing variation as taxes rise, or allowing an electric rate to vary with changes in power factor—can be gained from historical analysis of their development.

THE first big surge toward escalation followed World War I. At that time

*Attorney, Louisville, Kentucky. For additional personal note, see "Pages with the Editors."

there was, of course, an immense inflation and the prices of certain controlling items of our economy, such as coal, shot sky high. During such times it is not difficult to understand that utility management could not plan systematically without some means of stabilizing rates against the wild inflation of fuel prices. In this atmosphere of the early twenties, fuel charge escalation quickly took hold. There was some tendency to relax this development and eliminate escalation clauses between the two World wars, although they maintained a fairly strong position. Naturally, perhaps, from the beginning of World War II until the present, this foothold has, with few exceptions, been growing again.

It has been said that the basic purpose of escalator clauses is to provide utility management with a hedge against inflation and thus assure sufficient stability in the ratio of rates to costs so that a fair return may be maintained in the basic rate. Another purpose, frequently given in proceedings relating to gas rates, is to let gas rates fluctuate so as to maintain a competitive position with oil or coal for heating purposes. This latter type escalation seems as likely to be downward to keep gas from being priced out of the market as it is to be upward to keep revenues at a level of fair return.

THE trend of thought often has been that automatic escalation should be limited to fuel clauses and should not be permitted upon taxes, materials, labor, etc. It is frequently expressed in commission opinions that to let rates fluctuate based on all costs would be to shift from a regulatory body the responsibility of establishing rates and give that power to the supplying utility. It is also usually the thought of commissions that fuel escalation should apply only to large users of gas or electricity, chiefly industrial and large commercial customers. The theory is that the larger the customer the more likely it is to offer competition through self-service —it may put in its own power source rather than take power from a local utility if it finds rates too high. This, among other things, requires a cheaper rate to large users, and as the rate cheapens the dependence of that rate on the price of fuel increases. If the rate is not pegged to the price of fuel, it may one day be compensatory and the next day confiscatory, as fuel prices rise.

ONE can hardly undertake a review of the positions of various state utility commissions without soon coming to the conclusion that he is stumbling around in a morass of utter confusion and contradiction. It is difficult to understand how commissions can come out at so many varying ends unless each permits the applying utility to write its own rates according to its own notion. Few commissions seem to read or be guided by the decisions of others to the end that trends of legal harmony are difficult if not impossible to find.

Some examples of this confusion can be generally cited, beginning at first with the fact that some commissions have said that escalator clauses are all bad. A rate that escalates is not a "rate" in the dictionary sense of the word, but is only a means of arriving at a rate. A commission that permits rates to fluctuate in any manner other than by its own order has surrendered its responsibility to the public and given that degree of control to the utilities whom it is supposed to regulate. This is essentially

what the Maine commission has said in rejecting escalation.[1]

HOWEVER, many other commissions have indicated that escalator clauses, particularly fuel clauses, are all right. Frequently, they are given approval with some qualification. Some commissions have at one time held blanket escalation on all types of customers bad and at others, good —with little effort to explain the change of heart.[2] Many say that fuel charges are only acceptable for industrial and heavy commercial customers. Some say that justice "compels" the conclusion that fuel costs should be shouldered through escalation by all customers taking interruptible service.[3] In separating the categories of use subject to fuel clause escalation from those which are not, power or gas used for street lighting is frequently excluded. Little real reason other than the pressure for obtaining an advantage for a governmental agency, as such, can be given for this exception.[4]

It has been held on several occasions that a fuel charge is a mere recoupment device and a stabilizer of a basic rate holding the latter at the proper level to provide adequate return.[5] The base price of the fuel from which the rate begins to escalate up or down should be a fairly current market price. Along this line, the Massachusetts commission has held that a fuel charge may be subject to attack and elimination despite the fact that its elimination reduces revenues below a fair rate of return, the thought being that a utility should not lean on a fuel clause for normal revenues.[6]

CLAUSES which permit escalation of rates based upon varying taxes seem to be in less grace than escalation on fuel alone. And some commissions which accept fuel clauses reject tax clauses.[7] One

[1] Re Portland Gas Light Co. (Me 1947) 69 PUR NS 154; principle affirmed by same commission in Public Utilities Commission *v.* Portland Gas Light Co. (Me 1951) 91 PUR NS 155. See also Re Utah Power & Light Co. (Utah 1952) 95 PUR NS 390, where Utah rejects all types of escalation.

[2] In Re New Haven Gas Light Co. (Conn 1947) 67 PUR NS 103, the Connecticut commission upheld exemption of residential customers from the operation of a fuel clause in gas rates. But in Re Hartford Electric Light Co. (Conn 1952) 95 PUR NS 161, the same commission felt bound to include fuel clause adjustments in residential electric rates.

[3] Re Pacific Gas & E. Co. (Cal 1949) 82 PUR NS 473.

[4] Street lighting has been exempted in the following typical cases: Re Hartford Electric Light Co. *supra* (in this case it was pointed out that the energy portion was but a minor part of the total street-lighting charge); Re Rush County Rural Electric Membership Corp. (Ind 1947) 72 PUR NS 128; Re Southeastern Indiana Power Co. (Ind 1947) 71 PUR NS 148.

[5] Re Uniform Fuel Clause for Electric Utility Companies (Conn 1945) 57 PUR NS 250; Re Uniform Fuel Clause for Electric Companies (Conn 1944) 54 PUR NS 57.

[6] Re Clifford (Mass 1946) 65 PUR NS 142.

[7] Re Buzzards Bay Gas Co. (Mass 1949) 79 PUR NS 22.

¶ "THERE *is no doubt that we in America have left a seller's and arrived at a buyer's market. And even in the field of government-controlled monopoly, this simple fact has its effect. One of the results is an increased impatience with escalator clauses in gas and electric rates. At best such escalation forms a fair hedge against inflation and at worst it is pure obfuscation behind which a wary public suspects utility manipulation of the old 'hidden ball' play.*"

curious position on this point was taken recently by the Wisconsin commission in allowing tax escalation on some types of taxes and rejecting it on others.[8]

And what of the type of escalation which penalizes the user whose power factor drops off, or rewards one whose power factor remains high? This type attempts to adjust revenues of the supplying utility against certain electric loads dependent upon the amount of power which is usable and that which is unusable. Without getting technical, it can be said that electric motors, fluorescent lighting, and some other types of loads put an added burden on the power supplier because they occasion a drop in "power factor" and an increase in the amount of unusable power. "Power factor" clauses have been rejected as requiring metering which is too complicated[9] and generally power factor clauses are less prevalent than fuel clauses. However, here again other opinions constitute dissent.[10]

Some utility commissions, upon examining proposed fuel clauses, say that where a company has both thermal and hydro power the fuel clause must be computed solely against the thermal power.[11] Others have said that if the system is integrated and there is a mixture of all types of power, the only realistic way to compute a fuel clause factor is against the total power in the respective system.[12]

It would seem to me that this latter point is sometimes academic. If a system is not integrated and management can keep accounts relating to one type of power separate from another, then, of course, a fuel clause can easily be made applicable only to thermal power. But if the power is mixed, a subtraction of hydro from the total power of a given system will merely increase the decimal of fuel cost correction with the corresponding decrease in the number of units (kilowatt-hours) against which the factor applies. Conversely, lumping all power together increases the number of units and decreases the fraction. This self-correcting operation depends, however, upon escalation being based upon varying fuel costs actually experienced, and not upon varying market prices, unrelated to the cost-production ratio of the power supplier. In any event, it is obvious that an attempt to earmark and follow a kilowatt-hour through an integrated system using both hydro and thermal power, is completely fanciful.

Commissions contradict each other also in the question of whether escalation should be automatic. Many say it should,[13] yet others say it should be permissive and effective only as ordered by the commission.[14]

One noteworthy statement by the California commission says escalation can only go downward from a rate of fair re-

[8] Re Interstate Power Co. (Wis 1953) 100 PUR NS 62.

[9] Re Consolidated Edison Co. (NY 1945) 62 PUR NS 224. But cf. Glens Falls Portland Cement Co. *v.* New York Power & Light Corp. (NY 1947) 69 PUR NS 37.

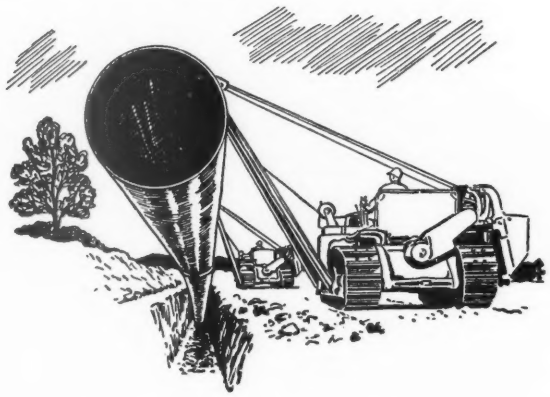
[10] Re Power Factor Correction for Fluorescent Tube Lighting (Okla 1939) 31 PUR NS 318; Wisconsin State Rural Electrification Co-ordination Committee *v.* Wisconsin Gas & E. Co. (Wis 1936) 17 PUR NS 31; but cf. Wisconsin State Rural Electrification Co-ordination Committee *v.* Northern States Power Co. (Wis 1936) 17 PUR NS 124.

[11] See United Ice & Coal Co. et al. *v.* Pennsylvania Power & Light Co. (Pa 1951) 89 PUR NS 432.

[12] Re Georgia Power & Light Co. (Ga 1948) 74 PUR NS 65.

[13] The vast majority of the cases approving escalation cited above make it completely automatic.

[14] Re South Jersey Gas Co. (NJ 1952) 96 PUR NS 71.



No Uniform Policy on Escalator Clauses

"ONE can hardly undertake a review of the positions of various state utility commissions without soon coming to the conclusion that he is stumbling around in a morass of utter confusion and contradiction. It is difficult to understand how commissions can come out at so many varying ends unless each permits the applying utility to write its own rates according to its own notion. Few commissions seem to read or be guided by the decisions of others to the end that trends of legal harmony are difficult if not impossible to find."

turn and not upward.[15] This was a case where the sole apparent purpose of escalation was to keep gas competitive with oil as a heating medium.

A lawyer who attempts to chop his way around in the jungle of legal opinion on the subject of these clauses is apt to find himself wandering in circles with his intellectual machete so dulled he is soon brought to a standstill. And yet perhaps the most extreme and conflicting limits to which escalator clauses have been put are not even recorded in commission opinions. Many strange cases exist in rates which have been filed and stand approved for lack of protest by ratepayers and lack of understanding by commissions.

I have recently had occasion to come across rates incorporating fuel clauses in which the established base price of fuel has been substantially below the fair market price for more than a decade and a half. I have noted fuel clauses which allow recovery for costs of fuel placed "in the pulverizing room of the generating plants in which the energy is produced." This throws on someone the burden of finding where the energy was produced. If the supplier purchases power it may come from anywhere within a vast pool of utili-

[15] Re Southern California Gas Co. (Cal 1950) 87 PUR NS 492.

ties, and is very likely impossible to trace. Moreover, it allows recovery not only of the cost of fuel but also of the cost of moving the coal around in whatever plant produced the power. These costs have obviously been charged once as an "above the line" part of normal operating expense in computing net revenues. To allow recovery again in a fuel charge is obvious duplication. And so, this whole provision is completely unrealistic and can be an easy vehicle for unwarranted computations.

ANOTHER escalator noted includes a penalty for any decline of power factor below 90 per cent. Yet another still in use permits escalation for any increase in taxes "subsequent to June 1, 1937." Certainly, the foregoing are fair targets for any customer who has the slightest understanding of rates or the faintest will to protect himself against razzle-dazzle rate making.

It is understandable in time of war or the time of inflation which inevitably follows, that utility management may get slightly panicky about costs. But application of the principle of escalation in the manner above described is unrealistic. It feeds public suspicion that utility management may be attempting to take advantage of its customers. It permits a basic rate which is quite misleading in its appearance and then hits the unwary ratepayer with surprises in several different ways. It belongs, frankly, to an era when to buy an automobile you had to buy a multitude of unwanted "extras," the over-all purpose of which was to increase the price.

It seems to me that this history of escalator clauses is an unhappy one, and that the entire utility industry should be entering a new and more responsible era. If I analyze it correctly, this should be the third major era in the development of the utility industry. The first era would begin about the time of Thomas A. Edison and end with Samuel Insull. The second era, a period of reaction and reform, would begin with Franklin D. Roosevelt and end with Harry S. Truman. The third era—which should be an era of mature self-discipline, good management, and fair dealing with the public—would begin with the Eisenhower administration.

IN his recent very interesting article in PUBLIC UTILITIES FORTNIGHTLY, Frank C. Sullivan takes as his title and theme the thought that "Utility Public Relations Comes of Age." He says a modern utility should be "interested in comprehending public opinion, and . . . in doing something about it along educational lines." [16] This is very true. It is also true that letting a customer see exactly what he is paying for is a good part of realistic education. The trend of present American merchandising is to put price tags on everything; to let the purchaser see that he is getting a fair deal at a reasonable markup. Again admitting differences between utility management and other retail merchandising, the wiser policy seems to acknowledge more similarity than was once supposed.

To this end of general rate simplification, I have attempted to formulate some suggested rules respecting escalator clauses. If these rules were uniformly applied, they would provide what the security utility management has a right to expect and, at the same time, strip unwarranted camouflage from rate structures.

[16] "Utility Public Relations Comes of Age," by Frank C. Sullivan, PUBLIC UTILITIES FORTNIGHTLY, Vol. LII, No. 10, p. 690, November 5, 1953.

In the first place, escalation if allowed at all, should be permitted only upon the cost of the ingredient from which the utility manufactures its product. This means fuel, whether it be oil, coal, or gas.

Secondly, the base cost at which the fuel charge begins to operate should be reviewed annually and bolted to the current market price of fuel so that escalation could reasonably be expected to operate down as well as up. This escalation would serve only to stabilize a basic rate set at the point of fair return.

Thirdly, there should be no loose language in the escalator clause such as "delivered in the company's bunkers," or "delivered in the company's pulverizing room." Delivery to the using company should be sufficient since all costs after that are charged as general operating expense.

Fourth, fuel charges should only be allowed against industrial and large commercial users. They should not be allowed against smaller commercial, residential, and farm users. These latter groups pay a higher rate for smaller amounts of service; there is less likelihood that they will seek to supply themselves and they are also less capable of computing or understanding escalation mathematics.

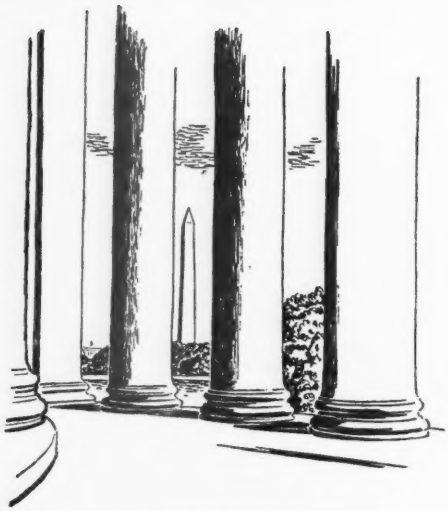
Fifth, a fuel charge should be expressed in terms of British thermal units instead of tons of coal, gallons of oil, or thousands of cubic feet of gas, since the former method gives a better fix.

And, sixth and finally, escalation should be based on actual system efficiency. This means that if an electric company puts in a steam-generating plant which produces more kilowatt-hours from a certain quantity of fuel, the fuel clause factor applicable to each kilowatt-hour should drop correspondingly. Thus, the public would derive the benefit of increased system efficiency. Put another way, the utility would not add to its recovery—if fuel prices go up—unless the ratio of total fuel expense to total power (or gas) produced goes up.

In a sensible review of uniform fuel clauses the Connecticut commission succinctly stated that a fuel clause should not "be applied in such a manner as to either enhance or diminish utility operating income. Rather the clause was designed to protect the utility from increased cost over which it had no control and to *deny to the utility any advantage accruing from decreased cost not attributable to efficiency in management.*" (Italics ours.)[17]

So, operating a fuel clause would only stabilize the basic rate. In times of stable fuel prices, it would be completely dormant. Every customer then could, like the housewife who buys her groceries at the supermarket and checks the cash register tape against the groceries in the bag, compute his own bill. And thus, the utility would establish a bond of confidence in the minds of its customers. This confidence would certainly eliminate many irresponsible attacks upon utilities. It would also strongly tend to limit conflicts over rate increases to reasonable discussions in the quest for a fair return.

[17] Re Uniform Fuel Clause for Electric Utility Companies (Conn 1945) 57 PUR NS 250 at 254.



Washington and the Utilities

Echoes of the Phillips Case

BARRING the unlikely possibility that the U. S. Supreme Court may reconsider its recent refusal to hear an appeal in the controversial Phillips Petroleum Company Case, gas and oil producers and their representatives in Congress are in a dither over what to do next. The Interstate Oil Compact Commission had a recent meeting in Oklahoma City and passed a resolution urging every step possible to overcome the highest court ruling under which the FPC must now consider taking steps to fix the rates of all natural gas producers and gatherers selling their product to interstate pipelines for resale under the Natural Gas Act.

The obvious step would be to pass a law exempting the independent producers along the lines of the Kerr Bill vetoed by former President Truman after it had been passed by the 81st Congress. The 81st Congress was controlled by the Democrats who provided roughly about two-thirds of the favorable vote in both chambers (44-38 in the Senate and 176-173 in the House). But even the oil state Congressmen are not optimistic over the chances of passing such a bill at the next session—even assuming that President Eisenhower would be more likely to sign it than his predecessor.

IF anybody is going to carry the ball for the oil and gas industries in the next Congress, the job will probably fall on the Senate Minority Leader, Lyndon Johnson (Democrat, Texas). There is probably a good deal of Kerr Bill sentiment remaining in Congress. But even some of the Congressmen from the gas-producing states are not enthusiastic about taking up such an unpredictable political football in this sensitive election year of 1954. As a matter of fact, a good many Republicans who would normally go along with reasonable proposals to relieve business from unnecessary government interference are from gas-consuming states, where the opposition to the old Kerr Bill was most pronounced. Wisconsin, for example, took the lead in successfully appealing the FPC order waiving jurisdiction in the Phillips Case to the U. S. Circuit Court of Appeals for the District of Columbia (100 PUR NS 506, 205 F2d 706).

There is only one bill already in Congress to exempt gas producers.

This is a measure (HR 2120) by Representative Lyle (Democrat, Texas). It is somewhat similar to the old Kerr Bill. Lyle's bill is now in the House Interstate and Foreign Commerce Committee, and it could be used as a basis for amendment and early action (probably with bipartisan sponsorship) after the gas-producing state Congressmen decide on further plans.

A less likely alternative is that an attempt might be made to attach a rider, exempting producers, on the Hinshaw Bill (HR 5976), which would exempt intrastate distributors of gas from FPC control. But this bill has already passed the House and been approved by the Senate committee, making it very difficult to change on the Senate floor. Certainly the Hinshaw Bill supporters would not take kindly to any eleventh-hour attempt to clutter it up with a Kerr-type rider.

The result of the court proceedings has been to confront the commission with a very important and burdensome field of jurisdiction. The first step will probably be to initiate a study of natural gas production and gathering operations. Meanwhile, a sort of holiday order, permitting independent producers to go on charging present contract rates until further specific order of the commission, is likely. Filing requirements on such contracts and other data will be promulgated in due course. This will all take time and give Congress an opportunity to act if it wants to in 1954.

Power-marketing Rules Clarified

BECAUSE of the misunderstanding of the Missouri river basin power-marketing policies—made evident in the testimony before the Langer Subcommittee—Assistant Secretary of Interior Aandahl announced certain clarifications to reassure preference customers that they were not losing any protection to which they are entitled by law. The new interpretation of policy was made public on December 12th with the endorsement of Interior Secretary McKay.

Provisions covering the disposition of available power were changed so as to spell out more clearly the details for dealing with public bodies and rural electric co-operatives, which are preference customers under the law. The amendment says that "power available but not needed until a later time by preference customers will be reserved for them as a class by selling it under short-term interim contracts under which it can be recaptured for the preference customers at the termination of such contracts." As to sales to nonpreference customers, the amendment says "power should not be sold under this category until it is clearly apparent that it is in excess of the needs of the preference customers." If there is a question, it should be sold under a short-term interim contract.

As to other objections by rural electric co-operatives in the Missouri basin, the amendment says that applications for power received after January 1st "will be as closely associated with the first round of contract negotiations as possible and processed expeditiously."

Aandahl explained that Ancher Nelsen, Rural Electrification Administrator, early last month spent some time with Secretary McKay and Interior Solicitor Clarence A. Davis working on the clarifying revisions.

SENATOR Langer (Republican, North Dakota) provided a double-feature sounding board for critics of the Interior Department's new marketing standards. As chairman of the Senate Judiciary Committee, Langer opened hearings in Washington in his capacity of ex officio chairman of the Judiciary Subcommittee on Antitrust and Monopoly.

Financial News and Comment

By OWEN ELY

The New EEI Power Survey

THE fourteenth semiannual electric power survey was recently issued by the Edison Electric Institute. It was prepared by a special committee headed by Walker L. Cisler, president of Detroit Edison Company, in co-operation with utility area representatives and manufacturers of heavy power equipment. The principal findings (based on returns from both privately owned and public power systems) were as follows:

The capability of the electric power systems of the United States is estimated at 93,000,000 kilowatts as of the end of 1953, and at 124,300,000 kilowatts three years later. However, there have been many delays due to earlier material shortages and construction labor disputes, and it is quite possible that near-term objectives may not be realized. In fact, the committee thinks the 1954 figure may only reach 104,000,000 kilowatts instead of the scheduled 106,500,000.

"Construction of new power projects continues to fall behind schedule," the report states. "Only about half the capacity scheduled at the beginning of the year for service in 1953 had actually come into commercial operation by October 1st. The present schedule of 14,000,000 kilowatts in 1954, followed by 11,000,000 in 1955, presents a real challenge." Moreover, if existing signs of a slackening in business and industry persist, it seems likely that the 1955-56 program may be rescheduled over a somewhat longer period.

THE 1953 peak load is estimated at 82,100,000 kilowatts, about one per cent below the estimate of six months ago; and forecasts for later years have been cut back by about the same percentage. Forecasts of gross margins of capability over peak load remain about the same as in the April estimate. (See below.) Gross margin includes the provision for maintenance, emergency outages, and system operating requirements.

Subject to the above reservations, the present schedule for expansion of generating facilities, based on equipment orders placed with manufacturers up to October 1, 1953, indicates an increase in new ca-

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pability of 42,500,000 kilowatts to be placed in service during the years 1953-56, inclusive. The figures for 1951-56 are shown in the table below.

The margin of estimated capability over peak load will not be uniform for all areas, however. Apparently the Pacific Northwest will continue short of power in 1956, as it was in 1952, if drought should prevail. Following are the figures for 1953 and 1956 by regions:

	Median Hydro Conditions		*Adverse Hydro Conditions*	
Region	*1953*	*1956*	*1953*	*1956*
I	13.3%	14.8%	12.3%	14.0%
II	13.9	18.1	13.8	18.0
III	8.8	11.5	5.6	9.4
IV	12.0	14.7	10.9	13.8
V	30.2	42.2	30.0	42.1
V (Summer Conditions)	12.7	20.8	12.5	20.7
VI	22.9	32.3	20.8	26.6
VII East	6.8	18.3	6.8	17.6
VII West	1.5	5.3	D9.3	D4.8
VIII	15.7	21.4	15.7	16.4
U. S.	13.4	17.4	11.6	15.5

D—Shortage.

The Federal Power Commission also compiles estimates of "scheduled additions to installed capacity." The FPC construction figures (compiled as of June) compare with those of the EEI as follows, in millions of kilowatts:

	EEI	*FPC*
1954	13.4	11.5
1955	10.8	9.5
1956	7.0	3.5

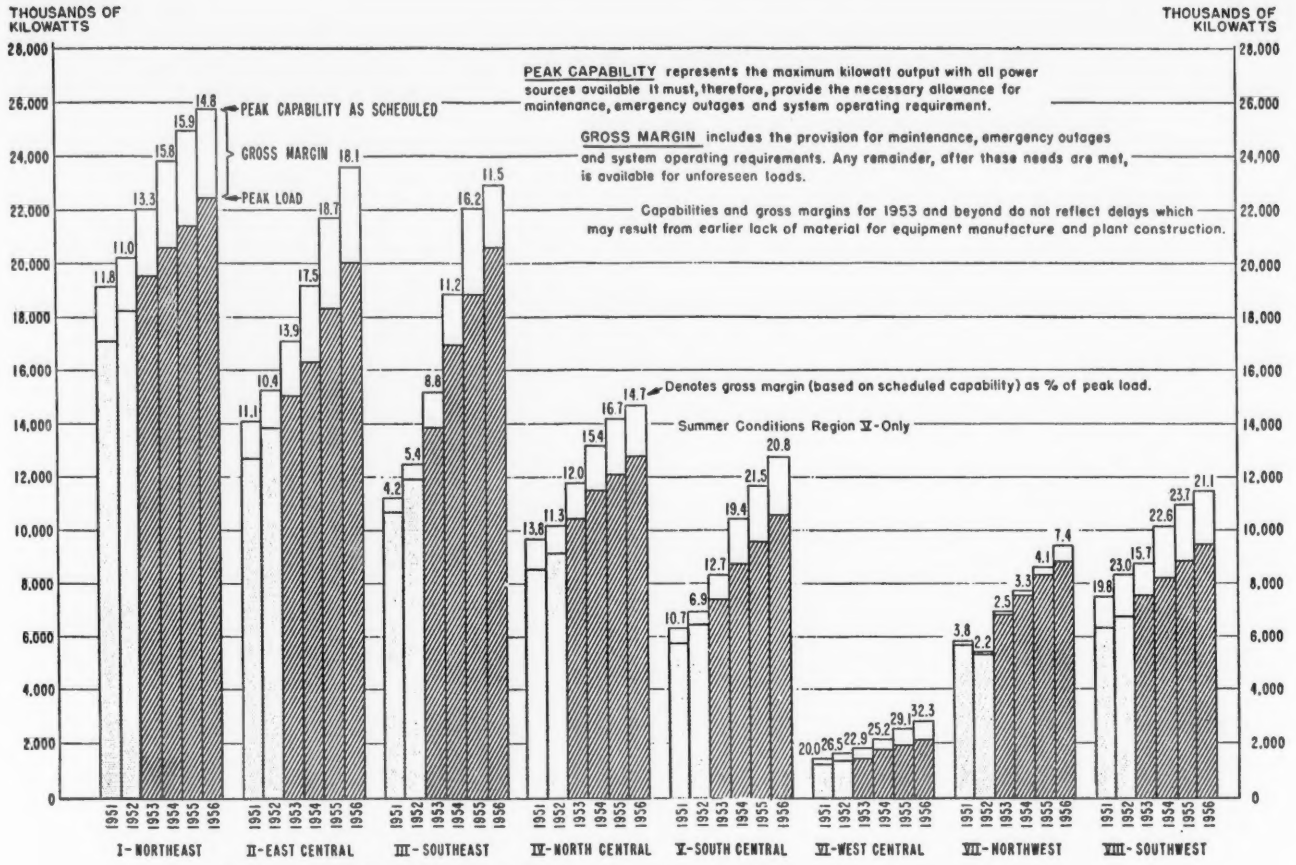
The differences in the two compilations may be due to variations in the use of capacity figures, as well as the difference in time of preparation, etc.

The Cisler Committee has also compiled data on the manufacture of electric generating equipment, which recently reached an all-time high because of the improved material supply situation. Thus, in the first nine months of this year about as much generator capacity was shipped by manufacturers as in the entire year 1952, and far more than for the year 1951. Other classes of heavy equipment have also benefited by the improved supply situation and there now appears to be few critical procurement problems.

As a result of this shortening in the production timetable, orders for new heavy power equipment have been declining rapidly in the past six months, so that capacity shipped has considerably exceeded new orders. (For steam generators the ratio was almost 4-to-1.) Thus, there is considerable "open" manufacturing capacity for 1954-56 beginning to develop. Manufacturers of steam generators are anxious for new bookings in order to maintain present schedules. Because of the larger capacity and complicated design of modern steam generators, particularly for reheat installation, more time should now be allowed for field work, so that for this reason manufacturers feel that orders

	Peak Capability		*Peak Load*		*Gross Margin of Capability Over Peak Load*	
	*Mill. KW**	*Per Cent Increase*	*Mill. KW*	*Per Cent Increase*	*Median Hydro Conditions*	*Adverse Hydro Conditions*
1951	76.2	—	68.1	—	11.8%	—
1952	81.4	7%	72.9	7%	11.8	—
1953E	93.1	14	82.1	13	13.4	11.6%
1954E	106.5	14	91.0	11	17.1	15.1
1955E	117.3	10	98.8	9	18.7	16.8
1956E	124.3	6	105.9	7	17.4	15.5

*Assuming median hydro conditions; figures are also given for adverse hydro conditions.
E—Estimated forecast.



Regional Peak Capabilities and Peak Loads, 1951 through 1956—Median Hydro Conditions

For Region V summer conditions are shown. December conditions are shown for all other regions. Figures for 1951 and 1952 represent actual operating data.

Edison Electric Institute Electric Power Survey

should still be placed long in advance of scheduled dates of commercial operation.

The committee called attention to the changes in the annual load curve resulting from the rapid increase in the summer requirements for air conditioning and irrigation pumping. With an abnormally hot and dry summer in 1953, the effect in many sections of the country was to create a summer peak load approaching or exceeding the previous winter peak. Since the summer months have been traditionally used for overhauling and maintaining generating facilities, this new development "may be expected to increase the amount of gross margin required for the satisfactory operation of the system."

Huge New Co-operative Construction Program in Pacific Northwest

As indicated above in the report of the Cisler Committee, there seems to be a continued threat of future power shortages during drought periods in the Northwest, unless the construction program in that area is stepped up. Population growth is continuing unabated and there is now an influx of small industries. In the past the private utilities have been somewhat handicapped in financing adequate expansion, although Washington Water Power with its Cabinet Gorge plant, and Pacific Power & Light with its Yale project, have expanded their hydro capacity substantially.

But the new 20-year contracts recently signed with Bonneville by most of the investor-owned utilities in the area now assure these companies better treatment in the distribution of power from government projects. With the administration proposal that public and private power should cooperate in development plans, a new program to push the development of hydro power on the Columbia river seems about to emerge.

At a meeting of the governors of four northwestern states with representatives of public and private power interests, a policy committee was recently formed to map out such a program over the next six to eight years. This included members of the Northwestern Power Pool, governors of the four northwestern states, representatives of British Columbia, the U. S. Army Corps of Engineers, the Department of the Interior, the FPC, and the Interstate Compact Commission.

It is reported that the participation of the government would probably be limited to a contribution to the construction cost of the dams, sufficient to cover the irrigation and flood-control features. A new generating company with a capital of some $600-$800,000,000 might be formed by the private utilities along the lines of the Ohio Valley Electric Company, with a large senior debt (presumably financed by insurance companies) and a small common stock issue (probably only 10 per cent) contributed by participating companies. This would keep income taxes and cost of capital at a relatively low level, thus greatly reducing the usual spread between cost of public and private power.

However, it may be mentioned that the success of the financing of EEI and OVEC with institutional funds was probably due in part to the contract for sale of almost the entire output to the Atomic Energy Commission, with favorable amortization provisions and other safeguards. In order to obtain a 90-10 setup in the Northwest, it may prove necessary to develop similar methods to satisfy the insurance companies regarding safety of earning power. The private utilities said to be interested in the program include Montana Power Company, Idaho Power Company, Moun-

tain States Power Company, Washington Water Power Company, Pacific Power & Light Company, and Portland General Electric Company. It is estimated that these companies might earn between 8 and 12 per cent on their common stock equity in the generating company.

THE position of Puget Sound Power & Light with respect to the new program is not clear. The proposed merger between Washington Water Power and Puget Sound still remains a controversial issue. President Frank McLaughlin of Puget Sound recently decided to "go it alone" and refused to renew either the merger agreement, or the earlier proposal for sale of Puget's major properties to a group of PUD's. The merger plan had been approved by the state commissions but FPC approval and stockholder ratification were still required at the time the merger agreement elapsed.

Needless to say, Puget Sound's action was disappointing to President Kinsey Robinson of Washington Water Power, as well as to a group of eastern banking houses. A proxy fight is said to be a possibility at the March stockholders' meeting. If Washington Water Power should eventually succeed in acquiring Puget Sound, its estimated share of the common stock of the new generating company might approximate 30 per cent. It is also reported that President Corette of Montana Power Company is active in formulating the new program.

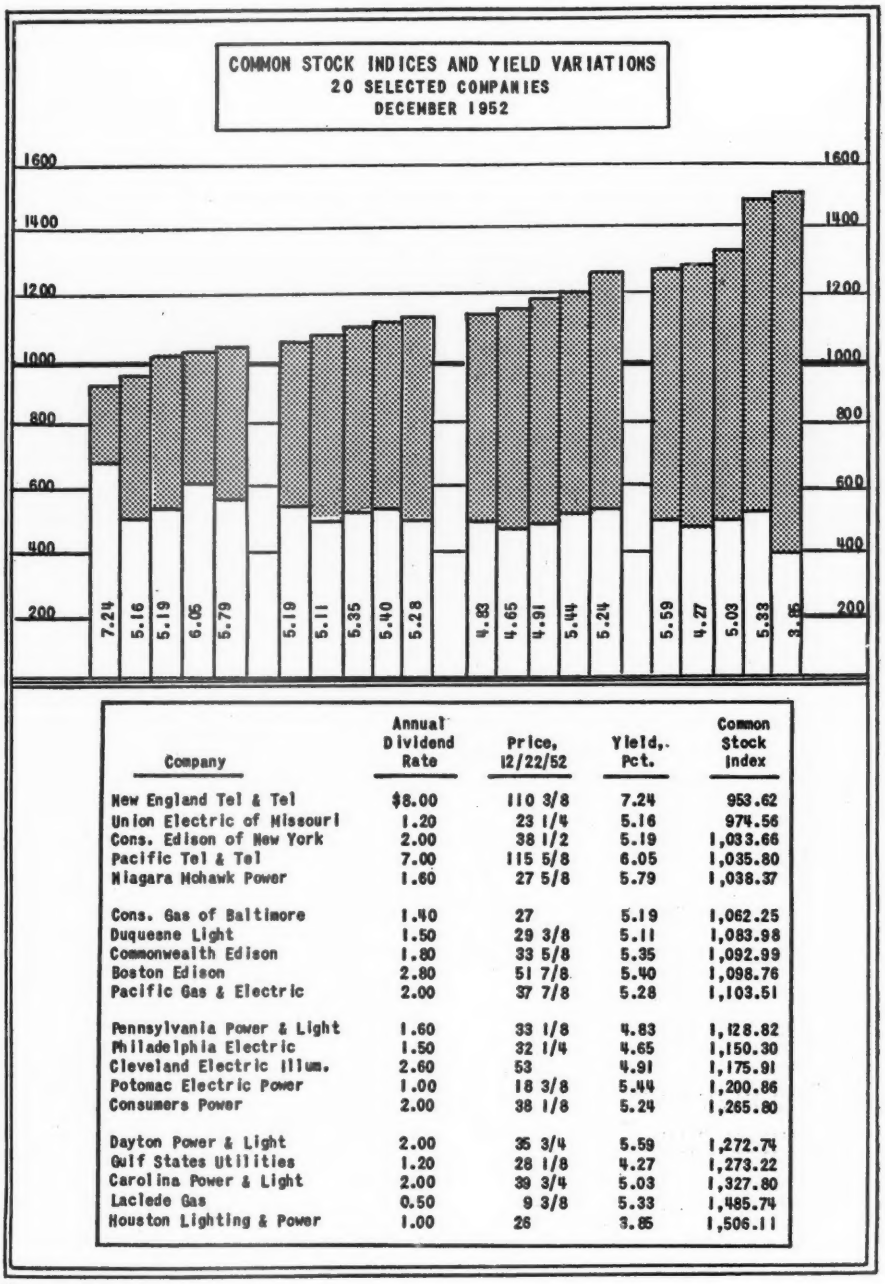
While in the past the private utilities have been somewhat handicapped in financing expansion on an adequate scale in the Northwest, it now appears that public power agencies are having some difficulties in obtaining adequate funds from Congress to do the job—hence the probable decision to let private power "carry the ball." The funds available to the Army Engineers under the current budget, said to be $400,000,000 over all, with about $100,000,000 allotted to the Northwest, are inadequate to complete the projected construction program for projects "authorized" by Congress. Hence it is thought that the Army may now be willing to release certain building sites for dam construction, to supplement those controlled by the private utilities, such as Idaho Power's huge Hell's Canyon project. (The Interior Department has given up its attempt to claim this as a federal project.)

IT is understood that while these private hydro projects might be turned over to the new generating company to become part of the joint undertaking, the proposed agreement would permit the participating utilities at some future date to take these projects out of the generating company and incorporate them into their individual systems—though they would not be permitted to retire their participation in the equity of the generating company.

Apparently the local PUD's in the Northwest will not participate actively in the new plan. The PUD's are said to be facing an increase in the base rate of Bonneville Power from $17.50 per kilowatt per annum to $22.50 by the end of 1954, because of higher construction costs, and it is conjectured that they will have some difficulty in absorbing the increased cost unless they raise their rates.

An Index of Public Utility Credit

THREE of the financial services—Moody's, Standard & Poor's, and Fitch—provide ratings for utility bonds, which are widely used in the financial district and elsewhere in determining investment policy and in appraising offering prices on new securities. (Fitch also rates



Company	Annual Dividend Rate	Price, 12/22/52	Yield, Pct.	Common Stock Index
New England Tel & Tel	$8.00	110 3/8	7.24	953.62
Union Electric of Missouri	1.20	23 1/4	5.16	974.56
Cons. Edison of New York	2.00	38 1/2	5.19	1,033.66
Pacific Tel & Tel	7.00	115 5/8	6.05	1,035.80
Niagara Mohawk Power	1.60	27 5/8	5.79	1,038.37
Cons. Gas of Baltimore	1.40	27	5.19	1,062.25
Duquesne Light	1.50	29 3/8	5.11	1,083.98
Commonwealth Edison	1.80	33 5/8	5.35	1,092.99
Boston Edison	2.80	51 7/8	5.40	1,098.76
Pacific Gas & Electric	2.00	37 7/8	5.28	1,103.51
Pennsylvania Power & Light	1.60	33 1/8	4.83	1,128.82
Philadelphia Electric	1.50	32 1/4	4.65	1,150.30
Cleveland Electric Illum.	2.60	53	4.91	1,175.91
Potomac Electric Power	1.00	18 3/8	5.44	1,200.86
Consumers Power	2.00	38 1/8	5.24	1,265.80
Dayton Power & Light	2.00	35 3/4	5.59	1,272.74
Gulf States Utilities	1.20	28 1/8	4.27	1,273.22
Carolina Power & Light	2.00	39 3/4	5.03	1,327.80
Laclede Gas	0.50	9 3/8	5.33	1,485.74
Houston Lighting & Power	1.00	26	3.85	1,506.11

Numerex Company

stocks.) The ratings serve as guideposts for those who do not have the facilities or the time to study the statistical background and market record of the securities involved.

Another financial service, the Numerex Company of 24 Stone street, New York city, prepares statistical "credit indices" for major utility companies, which are the equivalent of bond ratings. To give the long-term lender the proper degree of perspective, these indices are constructed over a long period of years and are maintained currently. Growth indices are also available, charted to show the rate of physical expansion of an individual company against the country or the territory in which it renders service. A brochure issued by the company states:

> These indices can be utilized to promptly uncover divergent credit and price (or yield) or both. A large volume of utility issues can be more readily supervised by constructing a composite of the credit of these holdings. This procedure renders it easy to observe constantly, where changes are necessary to improve the quality of the loans. It also conserves valuable time, which can be utilized to examine individual situations when this becomes urgent.

The credit index is composed of five factors, as follows:

	Approx. Weight	*Basic Standard*
Earnings (Interest Coverage):		
Latest Twelve Months	33%	3.31 times
Latest Calendar Year	12	do
Aver. Previous Five Years	5	do
Total	50%	do
Growth of Kilowatt-hours Output	24	1943-6 aver.
Debt Ratio	13	46.32%
Current Ratio*	5	1.924:1
Maturities (Ratio Current Debt to Total Debt)	8	—
	100%	

*Bank loans temporarily used to finance construction are transferred to capitalization.

The reported figures for any utility company are divided by the "basic standard" figures, to arrive at percentages showing deviation from normal. These percentages are then multiplied by the weights shown in the first column above, and the resulting figures are added to arrive at the "index of credit." A slight difficulty with this index has been the rapid growth in utility output and we think it might be desirable (at least for the purpose of charting the trend of the index over a period of years) to adjust the growth factor to a figure above or below that of the national average trend.

NUMEREX COMPANY has also set up a similar index for utility common stocks.

This is constructed along similar lines, as follows:

	Approx. Weight	*Basic Standard*
Earnings (Over-all Coverage of Fixed Charges and Preferred and Common Dividends)	61%	1.192 times
Current Ratio	5	1.924:1
Growth	24	1943-6 aver.
Equity Ratio	10	35.856%
	100%	

It will be noted that the earnings factor is here weighted at 61 per cent instead of 50 per cent in the case of the credit index, while the equity ratio is carried at only 10 per cent as compared with the 13 per cent assigned to the debt ratio. (The maturities factor with its credit weighting of 8 per cent is omitted.)

The service points out that utility common stocks in general afford yields commensurate with their quality. The poorer the quality the higher the return, and vice versa.

The chart on page 49 compares the Numerex common stocks indices with the yields of 20 selected utilities, as of December, 1952.

RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

1952 Rev. (Mill.)			12/10/53 Price About	Dividend Rate	Approx. Yield	Share Earnings* Current Period	% Increase	12 Mos. Ended	Price-Earn. Ratio	Div. Pay-out
		Pipelines								
$ 3	O	Alabama-Tenn. Nat. Gas	13	$ .60	4.6%	$1.35	14%	Sept.	9.6	44%
9	O	East Tennessee Nat. Gas	9	—	—	.59	44	Sept.	15.3	—
34	S	Mississippi River Fuel	38	2.20	5.8	2.70	D17	Sept.	14.1	81
52	S	Southern Natural Gas	28	1.40	5.0	2.19	3	Sept.	12.8	64
104	O	Tenn. Gas Trans.	23	1.40	6.1	1.62	14	Sept.	14.2	86
94	O	Texas East. Trans.	19	1.00	5.3	1.00	11	Sept.	19.0	100
47	O	Texas Gas Trans.	17	1.00#	5.9	1.52	21	Sept.	11.2	66
52	O	Transcontinental Gas	22	1.40	6.4	1.77	38	Sept.	12.4	79
		Averages			5.6%				13.6	
		Integrated Companies								
102	S	American Natural Gas	40	$2.00	5.0%	$3.55	64%	Sept.	11.3	56%
17	O	Colorado Interstate Gas	36	1.25	3.5	1.46	NC	Sept.	—	86
204	S	Columbia Gas System	12½	.90	7.2	.76**	D15	Sept.	16.4	118
9	O	Commonwealth Gas	11	(a)	4.0a	.41	D53	Dec.	—	—
8	A	Consol. Gas Util.	13	.75	5.8	1.07	D25	July	12.1	75
174	S	Consol. Nat. Gas	57	2.50	4.4	4.02	D14	Sept.	14.2	62
78	S	El Paso Nat. Gas	36	1.60	4.4	2.82	29	Sept.	12.8	57
29	S	Equitable Gas	24	1.40	5.8	1.88	3	Sept.	12.8	74
10	O	Kansas-Neb. Nat. Gas	25	1.20	4.8	1.64	D15	Dec.	15.2	73
63	S	Lone Star Gas	24	1.40	5.8	1.53	2	Sept.	15.7	92
18	S	Montana-Dakota Utilities ...	20	.90	4.5	.98	29	Sept.	—	93
13	O	Mountain Fuel Supply	20	1.00	5.0	1.32	7	Sept.	15.2	76
46	A	National Fuel Gas	15	1.00	6.7	1.28	—	Sept.	11.7	78
47	S	Northern Nat. Gas	38	1.80	4.7	2.40	45	Sept.	15.8	75
30	A	Oklahoma Nat. Gas	20	1.20	6.0	1.03**	D31	Sept.	19.4	117
21	A	Pacific Pub. Serv.	22	1.00	4.6	1.69	15	Dec.	13.0	59
92	S	Panhandle East. P. L.	72	2.50#	3.5	4.89	18	Sept.	14.7	51
8	O	Pennsylvania Gas	17	.80	4.7	1.79	D1	Dec.	9.5	45
123	S	Peoples Gas Lt. & Coke	138	6.00	4.3	9.44	20	Sept.	14.6	64
21	O	Southern Union Gas	24	.80	3.3	1.18	11	Dec.	20.3	68
159	S	United Gas Corp.	29	1.25	4.3	1.93	52	Sept.	15.0	65
		Averages			4.7%				14.2	
		Retail Distributors								
18	A	Alabama Gas	17	$ .80	4.7%	$1.31	7%	Sept.	13.0	61%
28	O	Atlanta Gas Light	21	1.20	5.7	1.81	12	June	11.6	66
4	O	Bridgeport Gas Light	24	1.40	5.8	1.72	24	Sept.	14.0	81
44	S	Brooklyn Union Gas	27	1.50	5.6	1.64	D18	Sept.	16.5	91
25	O	Central Elec. & Gas	13	.80	6.2	1.00	—	Sept.	13.0	80
6	O	Hartford Gas	36	2.00	5.6	2.07	D13	Dec.	17.4	97
11	O	Houston Natural Gas	21	1.00	4.8	2.02	53	July	10.4	50
10	O	Indiana Gas & Water	25	1.40	5.6	1.96	13	Oct.	12.8	71
5	A	Kings County Lighting	11	.70	6.4	1.00	6	Sept.	11.0	70
30	S	Laclede Gas	10	.60	6.0	.96	D2	Aug.	10.4	63
24	O	Minneapolis Gas	23	1.15	5.0	1.37	21	Sept.	16.8	84
6	O	Mississippi Valley Gas	21	1.00	4.8	1.97	NC	Sept.	10.7	51
7	O	Mobile Gas Service	16½	.90	5.5	1.54	17	Sept.	10.7	58
6	O	New Haven Gas Light	28	1.60	5.7	1.43	D7	Dec.	19.6	112
139	S	Pacific Lighting	34	2.00	5.9	2.51	16	Sept.	13.5	80
12	O	Portland Gas & Coke	20	.90	4.5	1.81	D1	Sept.	11.0	50
7	A	Providence Gas	8	.32	4.0	.34	D6	Dec.	—	94
5	O	Seattle Gas	20	.80	4.0	1.23	1	Sept.	16.3	65
6	O	South Jersey Gas	18	1.00	5.6	1.23	22	June	14.6	81
21	S	United Gas Improvement ...	34	1.80	5.3	2.25**	8	Sept.	15.1	80
31	S	Washington Gas Light	31	1.80	5.8	1.97	2	Sept.	15.7	91
		Averages			5.3%				13.6	
		Canadian								
15	S	International Utilities	31	$1.40	4.5%	$1.87	—	Sept.	16.6	75%

RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER COMPANIES

1952 Rev. (Mill.)			12/10/53 Price About	Dividend Rate	Share Earnings* Approx. Yield	Current Period	% Increase	12 Mos. Ended	Price-Earn. Ratio	Div. Pay-out
		Communications Companies								
		Bell System								
$4,040	S	Amer. Tel. & Tel. (Cons.) .	155	$9.00	5.8%	$11.47**	1%	Aug.	13.5	78%
185	A	Bell Tel. of Canada	40	2.00	5.0	2.35	40	Dec.	17.0	85
29	O	Cin. & Sub. Bell Tel.	70	4.50	6.4	4.61	1	Dec.	15.2	98
127	A	Mountain States T. & T. ..	104	6.00	5.8	7.03	52	Sept.	14.8	85
220	A	New England Tel. & Tel. ..	116	8.00	6.9	7.48	7	Sept.	15.5	107
536	S	Pacific Tel. & Tel.	116	7.00	6.0	7.56**	D6	Aug.	15.3	93
68	O	So. New England Tel.	33	1.80	5.5	1.93	26	Dec.	17.1	93
		Averages			5.9%				15.5	
		Independents								
10	O	Central Telephone	15	$ .90	6.0%	$1.59	29%	Sept.	9.4	57%
2	O	Florida Telephone	12	.80	6.7	.99	1	Dec.	12.1	81
101	S	General Telephone	45	2.20	4.9	3.83	86	Oct.	11.7	57
4	O	Inter-Mountain Telephone .	12	.80	6.7	.88	31	Dec.	13.6	91
12	S	Peninsular Telephone	31	1.60	5.2	2.10	29	Sept.	14.8	76
15	O	Rochester Telephone	14	.80	5.7	1.57	NC	Aug.	8.9	51
2	O	Southeastern Telephone ...	12	.80	6.7	1.18	79	Dec.	10.2	68
6	O	Southwestern States Tel. ..	18	1.00	5.6	1.72	41	June	10.5	58
28	O	Telephone Bond & Share ..	18	—	—	1.11	1	Dec.	16.2	—
15	O	United Utilities	18	1.00	5.6	1.64	10	Sept.	11.0	61
195	S	Western Union Tel.	43	3.00	7.0	1.02	D79	Dec.	—	288
		Averages			6.0%				11.8	
		Transit Companies								
29	A	Capital Transit	13	$1.60	12.3%	$1.16	2%	Aug.	11.2	138%
9	O	Dallas Ry. & Terminal	13	1.40	10.8	2.32	D6	Dec.	5.6	60
229	S	Greyhound Corp.	14	1.00	7.1	1.33	6	June	10.5	75
25	O	Los Angeles Transit	10	1.00	10.0	1.15	46	Dec.	8.7	87
31	S	National City Lines	17	1.40	8.2	1.86	D3	Dec.	9.1	75
71	O	Philadelphia Transit	4	—	—	Deficit	—	Dec.	—	—
7	O	Rochester Transit	3½	.10	2.9	.26	D77	Dec.	13.5	38
27	O	St. Louis P. S. A.	14	1.40	10.0	.91	189	Dec.	15.4	154
17	S	Twin City R. T.	14	1.60	11.4	—	—	Dec.	—	—
24	O	United Transit	4	—	—	.56	33	Dec.	7.2	—
		Averages			9.1%				10.2	
		Water Companies								
		Holding Companies								
29	S	American Water Works ..	10	$ .50	5.0%	$1.14	75%	Sept.	8.8	44%
6	O	New York Water Service .	59	.80	1.4	2.37	25	June	24.9	34
		Operating Companies								
3	O	Bridgeport Hydraulic	30	$1.60	5.3%	$1.62	D7%	—	18.5	99%
9	O	California Water Service ..	33	2.20	6.7	3.24	43	Oct.	10.2	68
7	S	Hackensack Water	34	1.70	5.0	2.42	D6	Dec.	14.0	70
4	O	Jamaica Water Supply	30	1.80	6.0	2.97	D1	Sept.	10.1	61
3	O	New Haven Water	58	3.00	5.2	2.76	D5	Dec.	21.0	109
6	O	Phila. & Sub. Water	50	1.00	2.0	4.69	—	Dec.	10.7	21
2	O	San Jose Water	33	2.00	6.1	2.42	13	July	13.6	83
9	O	Scranton-Springbrook	15	.90	6.0	1.07	D11	June	14.0	84
3	O	Southern Calif. Water	10	.65	6.5	.90	36	Sept.	11.1	72
3	O	West Va. Water Service ..	36	1.20	3.3	1.41	16	Sept.	—	85
		Averages			5.3%				13.5	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. *Earnings are calculated on present number of shares outstanding, except as otherwise indicated. **On average shares outstanding. #Includes stock dividend. (a)—Paid 4 per cent stock dividend. NC—Not comparable.

What Others Think

A History of Nation's Largest Nonsystem Independent Telephone Company

It is probably a safe bet that nobody is still living who witnessed the first public demonstration of the Bell telephone at the Philadelphia Exposition in 1876. But one interested spectator to the amazed reaction of Emperor Dom Pedro II of Brazil was a young high school student, J. Foster Warner, who lived to tell the tale at a banquet held in 1935 to celebrate the sixtieth anniversary of the invention of the telephone. "My God, it talks," said the Emperor, and with those four words elevated what had been an obscure and neglected exhibit to the top-ranking spot in the exposition.

The incident involving the Emperor of Brazil was only the first in a series of dramatic events that have marked the history of the telephone industry. The young Warner, who later developed into a prominent Rochester, New York, architect, and who served for many years as a director of the old Rochester Telephone Company, and later as director of the Rochester Telephone Corporation, could no doubt have given a firsthand account of some of the ups and downs of telephony in Rochester. That task, however, has been very well accomplished by John P. Boylan, past president of the Rochester Telephone Corporation and now chairman of the company's board of directors. Boylan's little book, "A History of Telephony in Rochester, N. Y.," was recently made available by the Genessee Chapter of the Telephone Pioneers of America. Speaking of Rochester history, it was in this same city that plans were laid for the birth of PUBLIC UTILITIES FORTNIGHTLY, which was transferred to Washington, D. C., with its first issue in 1929.

The first obstacle faced by "the climax of wonders," as a current newspaper called the telephone, was raised by the city fathers of Rochester who, in 1886, instituted legal proceedings to determine whether the telephone company's right to set poles and string wires upon and over the city streets was a valid one. The company at this period had 1,000 telephones in service and had announced that measured service would supplant the then flat-rate service. When the court held that the mayor had exceeded his authority in granting the company the right to erect poles and string wires in the city without the consent of the city council, the latter promptly revoked the company's license. A mass meeting of telephone subscribers was held in the city hall to protest against the establishment of measured service at what they called prohibitive rates. Mr. Boylan describes the chaotic situation that followed:

By prearrangement on November 20, 1886, every subscriber removed his telephone receiver at noon and agreed not to use the telephone until the company came to terms. This remarkable mass strike of telephone subscribers has no parallel in telephone history. The following month the telephone company erected a pole during the night on the corner of South Union and Court streets to serve as a test case in court and to determine whether they, as a corporation, had the right to set poles and string wires in Rochester. The courts decided against the company and the pole was removed. The city then brought action against the company to remove its poles and wires from the streets as they constituted a public nuisance. Little progress was made in effecting a settlement with the city and the strike continued for eighteen months. Then on May 10, 1888, the city council approved a schedule of rates submitted by the telephone company.

THE unpleasant relations existing with the Bell Telephone Company of Buffalo, which provided Rochesterians with local service, became a strong factor in favoring the entrance of a competing telephone company in Rochester. In the fall of 1886, while the telephone subscribers' strike was still in effect, some leading Rochester citizens organized the People's Telephone Association of Rochester and contributed a fund to defray the cost of an investigation to determine whether or not an independent system could be installed in the city. The result was the establishment, ten years later, of the Rochester Telephone Company, which came into existence with a capital stock of $400,000. Its extraordinary growth soon made it a formidable factor in the city's communications. It also became widely recognized in the field of independent telephony as having one of the best constructed and most modernly equipped telephone plants ever built. Rochester was one of the first cities to adopt underground construction.

In its issue of June, 1901, *Telephony* magazine had this to say about telephone operations in Rochester:

> The Rochester Telephone Company is considered one of the best-managed exchanges in the independent field, and while the company, when first starting, never hoped to secure more than 3,000 subscribers, it has been compelled to increase its plant rapidly, and now has a 3,600-capacity switchboard practically filled, besides having a large number of private branch exchanges in the city, with from ten to one hundred instruments in each system, and connected with the main exchange by trunk lines. The company is rapidly extending its toll line systems throughout that part of the state.

During this early period, local telephone companies were organized in areas surrounding Rochester, and while operated as separate companies, they were owned to a large degree either by the Rochester Telephone Company or the New York Telephone Company, which had earlier absorbed the Bell Telephone Company of Buffalo. The inconvenience and economic disadvantage of two separate telephone companies led to a demand for a single city-wide system. The battle for supremacy between the competing companies had continued at a lively rate for years until their respective properties were consolidated in 1921. The Rochester Telephone Company contributed 22,592 stations to the consolidation and the New York Telephone Company contributed 29,827 stations, giving the newly formed Rochester Telephone Corporation a total of 52,419 stations.

THE new rate schedule filed by the Rochester Telephone Corporation, providing for measured service for business and flat rates for residence service, brought down on the company the wrath of Rochester's most prominent and

wealthiest citizen, the late George Eastman of Kodak fame. Eastman roundly condemned the measured service system, contending that it would stifle business by restricting the free flow of telephone traffic. The Rochester Chamber of Commerce, the city administration, all of the newspapers and civic clubs joined in the protest, setting the stage for one of the most spectacular campaigns in telephone history waged by these combined forces against the telephone company.

An amusing incident highlighted the preliminary hearing of the public service commission. Francis Dagger, a consulting telephone engineer from Toronto, Canada, was brought to Rochester by Corporation Counsel Pierce to testify in favor of flat rates, which were then in effect in Toronto. Under cross-examination by the company's counsel, Fred C. Goodwin, the witness said he had arrived in Rochester only that morning and had been driven about the city and a few miles out in the country on his arrival.

"How would you describe the topography of this company's territory?" asked Mr. Goodwin.

"I would say it is rather flat," replied the witness.

"And for that reason," questioned Mr. Goodwin, "you think we should have flat rates?"

"Yes, I would say so," replied the witness.

"That is all," said Mr. Goodwin.

THE spectators were highly amused as the frantic Mr. Pierce, jumping to his feet, said his witness was confused and, by dint of further questions, had the witness recant his previous testimony. The big public service commission hearing held at the Court House in August, 1921, brought more embarrassment to Mr. Pierce. The full membership of the commission, headed by Chairman William A. Prendergast, was present and excitement was at high pitch as Judge Arthur E. Sutherland, an outstanding orator, rose to attack the measured service system on behalf of the chamber of commerce. Boylan's words adequately describe the hilarious scene:

> Judge Sutherland was in fine form. His sallies brought round after round of applause from the gallery. He reminded the commission that the people in Rochester knew their rights and would fight for them to the last ditch. He recalled the subscribers' strike against the company in 1886 when they all removed their receivers and refused to replace them for eighteen months until their demands were recognized.
>
> The judge then overreached himself when he added, "We have not forgotten that demonstration any more than the battle of the Boyne has been forgotten." Corporation Counsel Pierce tugged frantically at Judge Sutherland's coat tail, but too late. Pierce knew, as did many in the audience, that the battle of the Boyne in 1690 wherein the Irish had suffered a humiliating defeat at the hands of William Prince of Orange was a contest that the Irish would like to forget.
>
> He winced when he realized that the chairman of the commission, William A. Prendergast . . . was also president of the Friendly Sons of St. Patrick. An embarrassing pause followed the judge's *faux pas*. Then Chairman Prendergast relieved the tension.
>
> Looking over his glasses at the judge he calmly remarked, "I hope it is forgotten in Ireland today," after which observation the proceedings continued.

THE measured service system for business was finally approved in 1923 but not before a bill had been introduced in the New York senate designed to hamstring measured service systems in New York by requiring that a telephone company itemize measured service calls on the subscriber's bill. At a public hearing on the

bill, Corporation Counsel Pierce intimated that the Rochester telephone operators could get even with complaining subscribers by charging them for nonexistent calls and that the company was condoning this practice. Whereupon the general manager of the Rochester company accused Pierce of implying that the company was conducting a school for crime. A petition signed by one thousand telephone operators was presented to Rochester's mayor in protest of the slanderous accusation made against them. An assurance from the mayor that the people of Rochester had every confidence in the honesty and integrity of the telephone girls was sufficient to cool tempers. An investigation by the Bureau of Municipal Research, financed by George Eastman, surprised Eastman by supporting the company's arguments for the measured service system, ending the prolonged dispute.

After consolidation, the growth in telephones continued at an accelerated pace. From 1922 to 1928, Rochester's volume of traffic increased 94 per cent while in the same period its traffic expense increased only 46 per cent—a high compliment to the efficient methods employed by management. In 1928, the president of the company enlisted the aid of the employees in a two weeks' campaign for new business. Never was there a greater demonstration of loyalty and co-operation on the part of an employee group. The quota established was 1,622 subscribers—one new telephone for every employee on the payroll. The campaign went over the top with the astounding total of 3,755 new telephones or 232 per cent of quota.

During the latter part of 1945 the first steps toward converting Rochester city to dial operation were taken, and in 1947 the corporation registered the largest gain in stations ever made in a calendar year —10,837. At the beginning of 1949, the company had a backlog of 11,700 applications for new telephones. Early in 1950, the charge for local calls from coin boxes was increased from five to ten cents, making Rochester the first city in the United States to inaugurate a 10-cent charge for local coin-box calls. In 1943, when the corporation retired the 5,000,000 block of preferred stock owned by the New York Telephone Company, it was assumed that this would automatically relieve the corporation from Federal Communications Commission jurisdiction. However, it was not until December, 1951, that this was brought about.

On January 29, 1952, the public service commission approved an application for a rate increase designed to bring in a gross annual increase in revenues of $1,300,000. "It is noteworthy to mention," states Boylan, "that the public service commission's approval of the entire amounts requested in this and . . . three other rate case applications . . . is rather unique in the light of commission history. Their action cannot be construed otherwise than as a high compliment to management for the convincing presentation of its testimony, for the completeness and accuracy of its many exhibits, and for the highly creditable manner in which the hearings were conducted by its efficient counsel and his staff."

The corporation's construction program in 1952 was the largest in the company's history, totaling $6,000,000. As of April, 1953, the backlog of 11,700 applications for new telephones had been reduced to 280, and an accelerated dial conversion program is now under way. Progress, in short, marches on, and the future of the corporation seems very bright indeed.

The March of Events

Brazil May Nationalize Power

PRESIDENT Getulio Vargas announced recently that Brazil would set up its own electric power industry, and warned that foreign power firms operating there may be nationalized in the process.

Brazil now gets most of its power from the U. S.-owned American & Foreign Power Company and the Brazil Traction Company, jointly owned by American, Canadian, and British interests.

Vargas told a provincial governors' convention that Brazil's power enterprise will be patterned after Petrobras, the national oil corporation, from which foreign capital is excluded.

He said detailed plans for the $100,000,000 "Electrobras" firm would be presented to Congress this month.

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Arizona

Rate Increase

THE Mountain States Telephone & Telegraph Company recently asked for a rate increase, leaving the amount up to the state corporation commission.

The commission was asked in the company's petition to decide "what additional revenues are needed to provide a fair and adequate return." A hearing on the request will be held after a study is made of the company's financial structure and operations by commission accountants and engineers, Commissioner William T. Brooks said.

The telephone company informed the commission that its earnings had "deteriorated to a dangerously low level," since present rates are being based "on conditions as they existed about three years ago."

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California

Gas Rate Increase

THE Southern California Gas Company, subsidiary of Pacific Lighting Corporation, has applied for a 4.6 per cent rate increase with the state public utilities commission.

F. Marion Banks, president, estimates the proposed rate hike would yield about $6,000,000 in additional annual gross revenues for the company, if granted. But of this total, he says, more than half would be absorbed by increased income

taxes. The requested rate boost, it was said, would add about 27 cents a month to the average bill of a typical residential customer.

Continuing inflationary conditions, a wage increase, coupled with the need to go out of the state for additional gas to supply the ever-growing population in southern California, were given as reasons for the requested rate increase.

Idaho

State Utility Proposal

PROPOSED legislation under which the state would produce and transmit electric power and communications was filed with the Idaho Secretary of State last month by Canyon county residents. To win a place on the 1954 general election ballot, the proposal needs the signatures of 27,500 qualified voters—10 per cent of the vote for governor in 1950.

One of the expressed aims of the proposed initiated bill is to place Idaho in a position to participate with other states and the federal government in developing water-power sites on the Snake and other rivers.

The proposed legislation would set up a 5-member Idaho Power and Communications Development Commission, the original members to be appointed by the governor and their successors to be elected at the next election. Under the bill, the commission would be authorized to "generate electric energy by water power, fuel, atomic energy, or by any other methods, and construct, purchase, and operate communication systems; to purchase, exchange, or otherwise acquire energy and stored and falling water for the purpose of generating electric energy; and to sell such electric energy at wholesale for resale and direct consumption, to municipal bodies, private agencies, and persons, and to furnish such electric energy to other agencies of this state."

The commission would be further authorized to construct, operate, and maintain multiple-purpose hydroelectric projects, and to acquire the property of privately owned electric and communication utilities "by purchase, condemnation, or otherwise."

It would be empowered to dispose of the distribution facilities it acquired to local municipalities for the distribution of power or the relay of communications.

The commission would be authorized to issue bonds within the limits of the state Constitution to finance its undertakings.

Kentucky

Order Declared Unreasonable

THE state public service commission must re-examine its approval of Union Light, Heat & Power Company's proposed sale of its water properties in northern Kentucky, Circuit Judge W. B. Ardery decreed last month.

Ardery declared the commission order approving sale of the properties to Commonwealth Water Company, Louisville, for about $500,000 was "unreasonable, arbitrary, and invalid." He added, "The consuming public residing in the plaintiff cities should be given equal and adequate opportunity to acquire the water properties."

Commonwealth after asking for $235,000-a-year rate increases, had been granted $165,000. The cities claimed they, if allowed to buy the properties, or Union, could operate the system cheaper than Commonwealth.

Maryland

Utility Laws under Study

THE state legislative council recently scheduled a committee meeting in January to consider proposed changes in state laws relating to public utility regulation.

Joseph Allen, people's counsel to the state public service commission, will be given an opportunity to outline his plan for more stringent regulatory legislation, including changes in procedures used in determination of valuations in rate cases involving electric, gas, telephone, and transit service.

New Mexico

More Effective Regulation Sought

A STATE legislative interim committee on public utilities recently directed the state legislative reference council to draft a proposed state constitutional amendment aimed at more effective state regulation of utilities.

Chairman T. E. Lusk said committee members felt the present state Constitution is too specific on utility regulation, with its provisions tending to hamstring regulatory bodies. The proposed amendment would be generalized, empowering the state legislature to draft specific laws to cope with changing situations.

The reference council was instructed to study the constitutions of New York, Wisconsin, and other states with respect to provisions affecting public utility regulation.

Meanwhile, the state corporation commission adopted new procedural rules and regulations. One new rule would permit the commission to enforce its rate orders pending the outcome of appeals to the state supreme court.

Vermont

Waives Exceptions

THE New England Telephone & Telegraph Company waived all exceptions in the 7-year rate dispute recently, ending any possibility that the company may appeal a decision providing for $501,000 in refunds to Vermont customers, plus yearly rate reductions of $310,000.

Company counsel said the action in voluntarily waiving the exceptions taken during months of hearings makes certain there will be no appeal of the state public service commission order by the company.

The commission order was issued on December 2nd upon conclusion of seven years of litigation over five requests for rate increases by the company. Of the $3,355,000 in annual rate increases sought by the company in Vermont since 1947, it was granted all but $310,000 a year. Refunds totaling $501,000 are for the years 1952 and 1953.

Progress of Regulation

Utility's Estimate of Current Value Found Wanting

In determining the rate base of an electric utility, the Maine commission considered evidence of current value, original cost, and prudent acquisition cost. In this era of high prices, commented the commission, the facilities would cost more than they did when actually constructed, even with modern machinery and techniques of construction and installation. The current value less depreciation would be greater than the original cost. For this reason, no single measure of value was used exclusively. The commission was of the opinion that on occasions, acquisition cost could be given substantial consideration in arriving at the rate base. This represents the difference between original cost and purchase price and is considered an investment at the time of purchase. When the original cost of the property is retired, the accompanying acquisition cost should also be written off. In the present instance, the property connected with the acquisition amount had been substantially retired, so the commission could give it very little consideration.

Commenting on the exhibits submitted by a witness for the company to show current value, the commission said:

> His alternating use of the index method and the unit cost method to find present-day cost gave him wide opportunity for subjective choice of figures, and varying results. It seems to us that, in procuring unit cost figures from contractors presently doing business with the company, by telephone inquiries, without bid, and with the purpose known, his results would not fairly approximate the costs likely to be anticipated in a real rebuilding program. We cannot subscribe to the conclusion that the properties of the company could not be reproduced in mass at less cost than in piecemeal, and the general experience in the business world is to the contrary.

A rate increase was granted which would produce a return of 5.9 per cent. This was considered fair and reasonable. *Re Central Maine Power Co. FC No. 1410, November 18, 1953.*

Year-end Balances Rejected in Rate Base Determination

The West Virginia commission, recognizing the fact that there has been some increase in the cost of money within the past year, authorized natural gas rates that would yield a return of approximately 6¼ per cent.

As to the rate base, the company challenged the test period methods of either taking the monthly balance and dividing the total thereof by twelve, or of taking an average of the beginning and end balances of the test year and adding proper amounts for materials and supplies and cash working capital. It asserted that since substantial amounts had been laid out in replacing wells which had reached the end of their useful life, a year-end balance should be used.

The commission rejected this theory, saying that the company overlooked the fact that after the wells had been completed, their cost was added to the amount on which it is entitled to earn a return. Even if not completed within the year, interest would be added to the cost of such wells until they were completed and became used and useful in the natural gas business. Furthermore, substantial amounts laid out for lease rentals, the drilling of nonproductive wells, and the plugging of depleted wells were included in operating expenses for the test period, even though productive wells were actually in use only about 75 per cent of the period.

Local Consumer Benefits

The commission was disturbed over the fact that even though West Virginia customers were in close proximity to the production and transmission system of the company, no consideration of this fact was given in allocating the cost of service between West Virginia customers and wholesale interstate customers. It said:

> Local consumers should not be deprived of the benefit of these lower costs. However, since it is not possible for the commission to determine the cost of the gas produced in West Virginia or the cost of the gas purchased by it from independent West Virginia producers, with that degree of definiteness required in a rate proceeding, further discussion of this matter at this time would serve no useful purpose.

Re United Fuel Gas Co. Case No. 3921, November 6, 1953.

Middleman Ousted in State Hospital Gas Investigation

THE Kansas commission, investigating the supply of natural gas to a state hospital, was disturbed by the revelations disclosed at the hearing. A one-man corporation was purchasing natural gas from a pipeline company and reselling it to the hospital at excessive profit.

The corporation had no independent supply of gas for resale and its line serving the hospital from the main suppliers was less than a mile long. The total value of the corporation's assets, depreciated, was just a little over $1,100. Yet a gross profit of $21,000 had been realized for the 12-month period preceding the hearing, which figure did not even include receipts from other domestic customers connected to the lines of the corporation.

The commission commented on the arrangement in these words:

> . . . profits realized therefrom by Miami are unconscionable. Moreover, it is unreasonable and unfair that the people of Kansas are compelled to pay exorbitant prices for gas furnished to an eleemosynary institution caring for more than 1,500 patients.
>
> It is inconceivable to us that a "one-man" corporation with an investment of $1,161.09, with no independent supply of natural gas, purchasing gas from a pipeline company and transporting it

less than one mile, should be permitted to collect and receive such excessive profits. The payment by the Kansas taxpayers of high tribute for gas for the state hospital at Osawatomie can never be reconciled with the fact that gas for that institution is readily obtainable from one of the leading takers of gas from Kansas.

Feeling that public policy prevented it from harboring circumstances that created either excessive profits or an unreasonable return on plant in service, the commission decided that a fair and reasonable contract between the state and the pipeline company would serve to eliminate the unnecessary middleman who had been the recipient of this unrealistic profit over the years. *Re Miami Pipe Line Co. et al. Docket No. 45, 164-U, June 18, 1953.*

Power Purchases from Parent Questioned

THE Georgia commission granted a temporary rate increase to the Georgia Power & Light Company, a subsidiary of Florida Power Corporation, to cover approximately the actual increase in the cost of power, plus recent wage increases and taxes. This action was taken on rehearing of an earlier order authorizing a rate increase.

As a test of the reasonableness of the company's cost of power, the power requirements were applied to power purchase contracts in the area. According to this computation, the cost to the company would be less under these various contracts than under an existing contract with the parent company. The commission noted that it has instituted an investigation of the question whether or not the company could obtain its power from another source at a lower cost. In view of this fact, it authorized the temporary rate increase pending the outcome of the investigation.

Commissioners Walter R. McDonald and James A. Perry dissented on the ground that the company was earning approximately 5.5 per cent return under existing rates. They offered a resolution that the requested rate increase be deferred pending issuance of an order to show cause why the company should not purchase power at a cheaper prevailing rate from the Georgia Power Company and why the latter company should not sell such power to the Georgia Power & Light Company. *Re Georgia Power & Light Co. File No. 19313, Docket No. 470-U, October 27, 1953.*

Stock Issuance for Land Purchase Approved

A TELEPHONE company was authorized by the North Carolina commission to issue ten additional shares of common stock as a means of acquiring a parcel of land for a central office building. The land was owned by a female employee of the company and her husband. They refused to accept a cash payment for the land and insisted on being paid in shares of common stock.

The commission indicated that it did not "look with favor upon the issuance by any utility under its jurisdiction of a mere handful of securities because of the effort and expense involved in such an issuance."

However, since the company would be forced to purchase a less desirable location if the commission did not approve the transaction, and since the issue appeared to be within the company's corporate pur-

poses and compatible with the public interest, the application was approved. *Re Old Town Teleph. System, Inc. Docket No. P-44, Sub. 10, September 21, 1953.*

Telephone Company Granted 30 Per Cent Rate Increase

THE Nevada commission authorized a telephone company to increase rates 30 per cent on an interim basis. Present rates had been in effect for twenty years. But taxes, wages, and amounts expended for materials and equipment had increased substantially. All earnings had been put back into equipment and operations.

The company was planning construction projects that would require additional capital. The interim increase, while superficially high, would yield a return of approximately 5.77 per cent, which the commission considered fair and reasonable. *Re Southern Nevada Teleph. Co. Case No. 1226, July 2, 1953.*

SEC Frowns on Noncallable Senior Securities

AN issuance and sale of preferred stock by a subsidiary of a holding company was exempted from competitive bidding requirements by the Securities and Exchange Commission. The company had negotiated a sale to institutional investors. Recently there had been disappointing results with respect to issues submitted to competitive bidding, as well as poor acceptance of a number of issues which had been placed on the market. Furthermore, there are presently, and in the near future will be, a large amount of new securities appearing on the market.

The commission did frown on the stock's redemption provisions, however. As negotiated, the stock will be noncallable for three years. The commission said that it looks "with strong disfavor upon the issuance of nonredeemable senior securities." It did not insist upon the elimination of the nonredeemable feature, however, because the sale had been negotiated before an earlier warning on noncallable securities.

Testimony to the effect that the probability of desirable refinancing of this stock within the next three years was so remote that it could not conceivably be said to outweigh the benefit to the company in selling its stock, at the present time, on the terms accepted by the prospective purchasers was also considered.

The commission warned, however, that nonredeemable features in senior securities, even though the period of nonredeemability is short, should not be resorted to as a means of reducing the cost of money. It said that in the future it would insist that all reasonable efforts be made to keep this "undesirable feature" out of financing programs. *Re Indiana & Michigan Electric Co. File No. 70-3131, Release No. 12140, September 21, 1953.*

Federal License for Power Project on Navigable Stream Overrides State Requirements

THE United States Court of Appeals upheld a Federal Power Commission order granting the city of Tacoma a license to build hydroelectric dams on the

Cowlitz river in the state of Washington. The appeal was taken by the Washington State Department of Fisheries and Game and a sportsmen's association. It was based upon the claim that the city had not complied with state laws.

The court concluded that the commission acted properly in not requiring Tacoma to show compliance with the laws of Washington regulating dam construction in that state. Compliance with state law would have prevented the development of the project which, in the commission's opinion, was best adapted to a comprehensive plan for the development of a concededly navigable stream. Federal authority over navigable waters is superior to that of the state.

Objectors also claimed that Tacoma, as a creature of the state, could not act in opposition to the policy of the state or in derogation of its laws. The court concluded that state laws may not prevent the commission from issuing a power project license or bar the licensee from acting under the license.

The court decided that evidence sustained the finding that the dams were necessary to alleviate a known power shortage in the West. In discussing the effect of the projects on the fish runs in the river, the court said:

> As we see it, it is not within our jurisdiction to prescribe a policy. The federal government has the jurisdiction over navigable rivers and it is within the power of the Congress and the Executive to prescribe the policy in relation thereto. If the dams will destroy the fish industry of the river, we are powerless to prevent it. It is admitted that the fish industry on the river is an important one and every known method should be used to preserve it. If it is the law (and we are not holding one way or another) that the commission is held to the use of discretion in its requirements as to the preservation of any use to which a navigable stream is currently being put, we hold that the commission has given the subject of the fishing industry due consideration and has not abused its discretion.

State of Washington Department of Game et al. v. Federal Power Commission, 207 F2d 391, affirming (1951) 92 PUR NS 79.

No Delay in Installing Gas Space-heating Service

PROPOSALS by a natural gas company that would tend to delay installation of space-heating service were rejected by the Michigan commission. A federal agency (PAD) order restricting such additional installations had been lifted in Michigan on March 1, 1953.

The company presented a tariff with its pipeline affiliate that limited the supply to space-heating customers. According to the commission, the company had always been treated as operating an integrated system, and gas received into its lines lost its identity when commingled, no matter from what source it was obtained. Gas obtained from other sources, it was said, could in no way be considered as subject to the tariff provisions and the company should be able to add space-heating customers from such other supply.

The company proposed to add only a few space-heating customers after the 1953-54 heating season. It was explained that this was the only practical plan, as the storing of interruptible gas requires that gas either be in storage or its availability for storage be certain prior to the time the plan is placed in operation.

The commission was not satisfied with such an arrangement, saying that for over three years additional space-heating customers had been refused service, whereas there was not until August 23rd of 1953 any limitation on another class of customers being served under the interruptible schedule.

In addition, an examination of estimates for lost and unaccounted-for gas, taken because of the claim that the system required a safety factor to compensate for cyclic variations in temperature, revealed that such estimates were included at figures in excess of those actually experienced. Furthermore, approximately four weeks of the heating season had passed with temperature conditions being warmer than normal, resulting in less than normal usage of gas. The commission, in ordering immediate installation, said:

> All of the foregoing in our opinion provides an adequate margin of safety for the added customers being contemplated, representing only slightly over 3 per cent of the total space-heating customers connected in Consolidated's integrated system.

Allocation for Space Heating

An equitable distribution of space-heating installation was next considered. Although a chronological record of all requests would serve as a proper basis for establishing priority, it was recognized that there was a considerable difference in the number of space-heating customers now served by the company in its several districts and between distinct areas within a single district. In order to spread the benefits of this type of service more uniformly, it was ordered that new installations be allocated among the several districts in proportion to the number of non-space-heating residential and commercial customers in each. The same plan should be followed within a district when it is composed of separate and distinct service areas.

To enable the greatest number of people to benefit from such service, installations were limited to those whose requirements would not exceed an input of 250 cubic feet per hour. It was further ordered that an equal number of approvals be granted for conversion installations in existing buildings and for new single homes for which an application is made by the future occupant thereof. Finally, the company was placed under the further obligation to establish equitable limitations on the time allowed for completion of installations so that the privilege of deferring installation, especially for new buildings, would not be abused. *Re Michigan Consolidated Gas Co. D-3430-53.5, D-3842-53.14, October 20, 1953.*

Other Important Rulings

BONDS *to Finance Plant.* The issuance of bonds to finance a municipal plant acquisition was authorized by the Indiana commission subject to the condition that the ordinance under which the bonds are authorized shall be amended to allow the transfer of surplus funds in the operating and maintenance fund or in the bond and interest redemption account to the other fund or account or to the depreciation account, in view of court decisions holding that as against bona fide purchasers of bonds no such transfers may be made from the bond and interest redemption account unless provision is specifically made therefor in the empowering ordinance. *Re Indiana Gas & Water Co. No. 24371, October 1, 1953.*

Pension Payments. The Maryland commission ruled that any payment made by a sanitary commission to a pension or retirement fund must be charged as an expense of the several departments of such utility in the same proportion that receipts of the respective departments bear to the total receipts, although proper accounting would normally require that the cost of retirement expense for construction work be properly borne by that account. *Morris v. Washington Suburban Sanitary Commission, Case No. 5298, Order No. 50256, August 25, 1953.*

Return. A return of 6 per cent on an original cost depreciated rate base was considered reasonable for a water company by the Nevada commission. *Re Zephyr Cove Water Co. I & S Docket No. 138, June 16, 1953.*

Operating Ratio. The Utah commission decided that a rate increase which would enable a motor carrier to reduce its operating ratio from 102.7 per cent to 97.9 per cent was reasonable and in the public interest. *Re Lake Shore Motor Coach Lines, Inc. Case No. 3973, November 10, 1953.*

Titles and Index

Preprints in This Issue of Cases to Appear in
PUBLIC UTILITIES REPORTS

Titles

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PUBLIC UTILITIES REPORTS

OREGON PUBLIC UTILITIES COMMISSIONER

Re Pacific Telephone & Telegraph Company

U-F-1714, Order No. 32532
October 6, 1953

APPLICATION *for approval of telephone rate increase; proposed increase disapproved, smaller increase authorized.*

Valuation, § 299.1 — Working capital allowance — Tax accruals.

1. No allowance should be made for working capital where the company has an adequate supply of working cash available at all times by virtue of accruals for the payment of federal income taxes, p. 4.

Apportionment, § 7 — Telephone plant, revenues, and expenses — Interstate and intrastate operation.

2. An intrastate rate base of a telephone company furnishing both interstate and intrastate service should be based upon the allocation between interstate and intrastate on a nation-wide basis and on the basis of the Separations Manual as modified by the National Association of Railroad and Utilities Commissioners, p. 5.

Return, § 11 — Original cost basis.

3. The preferable rate base is average original cost of property used and useful in providing service, less the average depreciation reserve, and including working capital and materials and supplies, p. 5.

Return, § 111 — Telephone company.

4. Telephone rates yielding a return of 6 per cent were considered sufficient to provide an adequate return and to permit the payment of all corporate costs, plus a reasonable amount for earned surplus, as against a request for rates yielding a return of 7½ per cent, p. 5.

The above-entitled matter was duly heard on July 2, 1953, and thereafter reconvened on July 29, 1953, at Salem, Oregon, before Chas. H. Heltzel, Com-

missioner, and David Don, as Examiner. The following appearances are of record herein:

APPEARANCES: For applicant: Hart, Spencer, McCulloch, Rockwood & Davies, Attorneys, Portland, by Richard Devers, in behalf of The Pacific Telephone and Telegraph Company.

For commissioner's staff: John R. McCullough, Assistant Attorney General, Salem, in behalf of Public Utilities Commissioner of Oregon.

For intervenors: Nathan A. Boody, Commissioner of Public Utilities, Portland, and Alexander G. Brown, City Attorney, Portland, in behalf of the city of Portland; Chris J. Kowitz, City Attorney, Salem, and T. W. Churchill, Assistant City Attorney, Salem, in behalf of the city of Salem; Daniel O. Potter, Assistant Recorder, Eugene, in behalf of city of Eugene; R. J. Hanson, City Commissioner, Astoria, in behalf of city of Astoria; Gust Anderson, Executive Secretary, Portland Central Labor Council, Portland, in behalf of Portland Central Labor Council; Charles O. Porter, Attorney, Eugene, in behalf of certain interested parties; Dexter Fairbanks, Portland, in behalf of "Citizens' Committee of Telephone Rates."

Interested parties: Raymond C. Coulter, Eugene, in propria persona intervenor); H. R. Kaiser, Corvallis, in propria persona (intervenor).

HELTZEL, Commissioner: On December 12, 1952, The Pacific Telephone and Telegraph Company, hereinafter referred to as applicant, filed its Advice No. 351, with schedules named therein to become effective January 11, 1953. The schedules of rates, had they been permitted to become effective, would have increased telephone charges for services in an amount totaling approximately $3,960,000 annually to the telephone users in the state of Oregon.

The purpose of the proposed adjustments was to provide increased rates to basic exchange schedules and other service schedules, together with certain adjustments for intrastate message toll telephone services in the area served by the applicant. They were designed to produce a gross annual increase as above stated which, after federal income taxes and other percentage gross revenue charges, would provide applicant with a net operating additional income of $1,858,468 annually.

On January 7, 1953, by P.U.C. Order No. 31836, the tariffs under said Advice No. 351 were suspended for a period of not to exceed 180 days from January 11, 1953, pending investigation and hearing. On July 2, 1953, by P.U.C. Order No. 32374, said tariffs were further suspended for an additional period of ninety days from and after July 11, 1953.

Applicant urges that a 7½ per cent rate of return is necessary and that by virtue of rapid expansion its financial soundness has been impaired because of the unfavorable ratio of equity to borrowed capital.

Applicant here claims that in order to attract more equity capital, it is necessary that the company earn a rate of return of approximately 7½ per cent so as to provide an earned surplus in the total amount of not less than $125,000,000.

Applicant likewise advanced the position that additional revenue is

needed to meet increased costs of labor and to provide sufficient earnings to attract capital for the further development and expansion of its properties; that additional earnings were justified on the basis of the increased costs of living shown to exist through evidence introduced by applicant; that living costs have increased by approximately 89 per cent over 1939; and that the dollar today is worth approximately 53 cents of the dollar of 1940. It was also the company's contention that consideration should be given to the equivalent dollar value of the rate base, and that the application on equivalent dollar basis would increase the applicant's book value of approximately $142,000,000 to an equivalent dollar value of approximately $182,000,000.

Evidence was adduced in behalf of applicant and certain parties of interest, the hearing was completed, and the matter submitted for determination. Based upon said evidence and record it is found that:

Applicant is a California corporation, incorporated December 31, 1906, with its principal offices located in San Francisco, California. It owns and operates a telephone system located in the states of California, Oregon, and Washington, and in part of the state of Idaho, and provides both intrastate and interstate service. A wholly owned subsidiary of applicant renders telephone service in the state of Nevada.

Applicant is one of twenty-two associated companies of the Bell System, the Bell System furnishing telephone service on a nation-wide basis through the medium of exchanges interconnected by toll circuits. Through this association, independent companies and the long lines department of the American Telephone and Telegraph Company extends interstate toll service to its patrons on a world-wide basis.

The American Telephone and Telegraph Company has controlled the applicant through stock ownership, holding approximately 90 per cent of the common shares of applicant.

Applicant, through its control by American Telephone and Telegraph Company, has not seen fit in the past to go to the general public to secure its equity capital but continues to finance its common stock issue through pre-emptive rights, which rights are held by the present preferred and common stockholders.

Immediately subsequent to World War II, the capital obligations of applicant consisted of 11.6 per cent debt capital, and 88.4 per cent equity capital. The present capital structure of the applicant consists of 40.8 per cent debt capital, and 59.2 per cent equity capital.

At the present time the earned surplus of applicant is approximately $29,000,000.

Approximately 10 per cent of the revenues of applicant are derived from its Oregon operations, and should this commissioner allow a 7½ per cent rate of return in Oregon, the over-all rate of return to applicant, systemwise, would be increased by only 2/10 of one per cent. It is obvious that an allowance of 7½ per cent rate of return in the state of Oregon would have no material effect on the ability of applicant to secure equity capital without the states of Washington and Cal-

ifornia giving applicant a like rate of return on its invested plant.

In the recent decision in the state of Washington, the applicant received a rate of return not to exceed 6.1 per cent upon its plant investment as determined by the Washington commission which excluded working capital in its entirety. The state of California has not given its final decision on a requested increase as applied for by applicant. By reason of the fact that approximately 76 per cent of the revenues of applicant are derived from its operations within the state of California, the action of the California commission is the major determining factor of the earning position of applicant as a whole.

The cost of securing capital by applicant has increased since the issuance of Order No. 28971 on January 11, 1952, 93 PUR NS 1. The commissioner permitted applicant a rate of return of 5.6 per cent on its original cost of capital devoted to public use, less average depreciation reserve, with the addition of working capital consisting of average materials and supplies only. The average plant devoted to public use was determined from applicant's books, with the separation of interstate and intrastate plant being determined in accordance with the Separations Manual of the National Association of Railroad and Utilities Commissioners. The separations plan was also applied to revenues and expenses as required under the provisions of the manual.

Applicant's operating expenses have increased due to a series of wage increases, and its present net revenue is insufficient to meet its present capital requirements and still leave an adequate amount to flow into earned surplus. Further wage adjustments as the result of negotiations recently consummated between employees and employer made effective as of September 1, 1953, will have an effect on the operating expenses of applicant of $523,500 annually.

[1] As to the inclusion of working capital in the rate base, it is found that materials and supplies are allowable. However, as to working cash, it is found that no actual working cash exists except as represented by accruals on the books of applicant. An adequate supply of working cash is at all times available to applicant by virtue of accruals for the payment of federal income taxes and, therefore, working cash should not be included in the rate base of applicant for ratemaking purposes.

The present-day purchasing value of the dollar and the significance of the theories advanced by applicant for fixing of a rate base were considered. However, a rate of return of approximately 6 per cent on a rate base of $84,034,925, which is determined by the original cost of plant devoted to public use in intrastate business, less average depreciation reserve, with the addition of working capital consisting of average materials and supplies excluding working cash, is ample to cover the increased costs of capital and to permit applicant a reasonable amount to accrue to earned surplus and is fair, just, and reasonable.

In order that applicant may earn a rate of return of 6 per cent on a rate base as found as being adequate by this commissioner, it will be necessary for applicant to receive additional gross revenue before federal in-

come taxes, of approximately $1,456,524, which will give the applicant an additional net revenue, after federal income tax and other gross revenue charges, of $431,260.

[2–4] From the foregoing it is concluded that the determination of an intrastate rate base should be based upon the allocation between interstate and intrastate on a nation-wide basis. Therefore, the separation of properties and of revenues and expenses should be on the basis of the Separations Manual as modified by the action taken by the National Association of Railroad and Utilities Commissioners at its convention in 1951. This plan is accepted and adopted as being the best presently available method of separation. Changes in the future undoubtedly will be made in the Separations Manual.

The best measure of applicant's intrastate requirements should be on the average original cost of its property used and useful in providing service to the customers, less the average depreciation reserve, and including working capital as it applies to materials and supplies.

A rate of return of approximately 7½ per cent, as applied for by applicant, on the fair value of its property devoted to public use in the state of Oregon is neither fair nor just and reasonable to the ratepayers of the state of Oregon.

It is further concluded that the increase in gross revenue to applicant totaling approximately $1,456,524 before taxes should be sufficient to provide an adequate rate of return of 6 per cent to the company and permit the payment of all corporate costs plus a reasonable amount for earned surplus.

It is therefore *ordered* that the tariffs as filed by The Pacific Telephone and Telegraph Company under its Advice No. 351 on December 12, 1952, to become effective January 11, 1953, are hereby permanently suspended; and it is *further*

Ordered that The Pacific Telephone and Telegraph Company shall file with the Public Utilities Commissioner of Oregon, subject to approval, revised basic exchange rates, and other service rates and charges, together with changes affecting regrouping of exchanges as of June 30, 1953, to reflect a general annual gross revenue increase to the company of not more than $1,456,524; and it is *further*

Ordered that revised exchange and other rates as herein permitted shall be filed, effective October 16, 1953, with the tariffs to be filed not later than October 15, 1953.

MICHIGAN CIRCUIT COURT, COUNTY OF INGHAM IN CHANCERY

General Telephone Company of Michigan

v.

Michigan Public Service Commission et al.

Docket No. 34,054

City of Ludington v. Michigan Public Service Commission et al., Docket No. 34,048

July 30, 1953

APPEAL *by telephone company from commission order allowing partial rate increase; reversed and remanded.*

Appeal and review, § 80 — Party permitted to appeal.

1. The statutory procedure for appealing from commission orders does not limit the bringing of appeals to the person or party first filing a complaint, but the right of appeal is given to any party in interest who is dissatisfied with the final order of the commission, p. 8.

Return, § 64 — Evidence as to subsequent operations — Admissibility where confiscation is claimed.

2. Evidence as to the operations of a public utility subsequent to the date of the last hearing before the commission should be considered to test the validity of the commission's rate order as against the company's claim of confiscation by the actual impact or effect of the order, p. 8.

Appeal and review, § 49 — Commission order — Return allowance — Confiscation.

3. A commission order, approving in part the application of a telephone company but allowing less than what the company considers compensatory, may be set aside if it appears that the commission's conclusions were based on insufficient proofs or that the result of the commission order is as to the company unreasonable, unlawful, and confiscatory, p. 10.

Return, § 53 — Confiscation — Service inadequacies.

4. Adequate and nonconfiscatory rates cannot be denied a telephone company because of service inadequacies, p. 10.

Rates, § 7 — Court authority — Statutory limitations.

5. A state statute, providing that no telephone company shall increase rates under any circumstances except upon application to the commission, does not limit the equitable jurisdiction and power of a court to protect the constitutional rights of the company to be free from the burden of having to charge confiscatory rates, p. 12.

Injunction, § 37 — Temporary injunction — Confiscatory rates.

6. Where a court finds that telephone rates established by the commission are confiscatory, the court may properly issue a temporary injunction restraining the commission from interfering with the company's charging the

rates proposed by it and remanding the proceeding to the commission with instructions for it to fix just and reasonable rates, p. 13.

Injunction, § 53 — Temporary increase pending reconsideration — Bond requirement.

7. A telephone company will be required to post good and sufficient bond for the refunding of any charges which might later be determined to be excessive where the company, after being allowed only part of a proposed increase by the commission, is permitted by a reviewing court to make its proposed rates effective pending a reconsideration of its rate application by the commission, p. 14.

Rates, § 198 — Unit for rate making — Telephone.

Discussion of the obligation of a telephone company which seeks an intrastate rate increase to separate its intrastate and interstate properties and earnings, p. 11.

Return, § 50 — Constitutional limitations — Commission action.

Statement that the rate-making actions of the commission, as of the legislature itself, must be within the limitations of both the state and federal Constitutions which protect a utility in the earning of a reasonable return upon the fair value of its property, p. 15.

COASH, CJ.: On January 22, 1952, the General Telephone Company of Michigan, a Michigan telephone utility, filed its application with the Michigan Public Service Commission requesting authority to charge and collect certain specific rates attached to said application designed to increase its gross annual revenues approximately $1,100,000. Public hearings were held by the Commission and concluded on July 2, 1952. At the hearings before the Commission certain municipalities served by the company, including the city of Ludington, intervened and were made parties to the proceedings. Therefore, on December 5, 1952, the Commission issued its Rate Order T–552–52.11, 97 PUR NS 1, denying the rates requested by the company but prescribing certain increased rates designed to provide the company with additional gross revenues of approximately $660,000 upon an annual basis.

From said rate order both the city of Ludington and the company have appealed to this court pursuant to the provisions of Act 206, Public Acts of 1913, as amended, Stat Ann § 22.1441 et seq. Although these separate appeals were consolidated for purposes of trial they are dealt with in separate opinions by this court.

The company's bill of complaint was filed with this court on January 3, 1953. Thereafter, upon petition, the city of Ludington was made a party defendant in this case. The company alleges that the rate order of the defendant Commission is unreasonable and unlawful because it prescribes rates and charges which fail to provide it with a reasonable return upon its property used and useful in serving the public and in violation of its statutory and constitutional rights to charge reasonable and lawful rates for its telephone service. In the answer filed by the defendant Commission it is denied that the rates prescribed by said order are unreason-

able, unlawful, or confiscatory and, therefore, the Commission prays that the company's bill of complaint be dismissed. In the answer filed by the city of Ludington it is claimed that the company is not entitled to earn a reasonable return upon its property because the company's existing service is inadequate and, further, that the company cannot claim confiscation because it has failed to separate its property used exclusively in intrastate business from its property used in its interstate business. This claim as to separation of property was not raised by the Commission in its answer nor is it raised by the city in its separate appeal.

The city of Ludington also filed with this court a motion to dismiss the company's bill of complaint upon the basis that the city's separate appeal had been commenced prior in point of time to the company's appeal (the city's bill of complaint was filed on January 2, 1953, one day prior in point of time to the company's bill of complaint) and that, therefore, this court is without jurisdiction to hear said cause. The city claims that after the city filed its appeal from the Commission's rate order the company was limited to intervening in the city's case.

[1] This court is of the opinion that the statutory procedure does not limit appeals from orders of the Michigan Public Service Commission to the person or party first filing a bill of complaint. The right of appeal is given to any party in interest who is dissatisfied with any final order of the Commission and is not expressly or impliedly limited as claimed by the city of Ludington. (Stat Ann § 22.1454.) Separate attacks on a Commission rate order have been approved in the cases of Lansing v. Public Service Commission (1951) 330 Mich 608, 89 PUR NS 125, 48 NW2d 133. Accordingly, the motion of the city of Ludington to dismiss the company's appeal will be denied.

[2] In the proceedings before this court, General Telephone Company of Michigan offered different or additional evidence some of which pertained to the operations of the company subsequent to July 2, 1952, the date of the last hearing in the proceedings before the Commission. Pursuant to statute this evidence was transmitted to the Commission under order of this court dated April 7, 1953. In its statutory report filed with this court on May 25, 1953, the Commission refused to consider the additional or different evidence which related to events occurring subsequent to July 2, 1952, upon the basis that such evidence was improperly received and consideration of same would constitute a new rate proceeding. The additional or different evidence was transmitted back to the Commission pursuant to the statute which reads as follows:

"Section 16. If upon the trial of said action evidence shall be introduced which is found by the court to be different from that offered upon the hearing before the Commission or additional thereto, the court before proceeding to render judgment, unless the parties in such action stipulate in writing to the contrary, shall transmit a copy of such evidence to the Commission, and shall stay further proceedings in said action for fifteen days from the date of such transmission. Upon receipt of such evidence the Commission shall consider the same,

and may alter, modify, amend, or rescind its order relating to such rate or rates, charges, joint rate or rates, regulations, practice, or service complained of in said action, and shall report its action thereon to said court within ten days from the receipt of such evidence. If the Commission shall rescind its order complained of the action shall be dismissed; if it shall alter, modify, or amend the same, such altered, modified, or amended order shall take the place of the original order complained of, and judgment shall be rendered thereon as though made by the Commission in the first instance. If the original order shall not be rescinded or changed by the Commission, judgment shall be rendered upon such original order." (Stat Ann § 22.1456.)

This court notes that the language of the above-quoted statute does not restrict additional or different evidence to evidence relating to any particular time.

In Michigan Bell Teleph. Co. v. Public Service Commission, Ingham Chancery No. 26,395, this court permitted additional or different evidence to be received which related to facts and circumstances subsequent to the close of the proceedings before the Commission. The purpose of such evidence was to show the impact or result of the rates prescribed by the Commission; and, when the evidence was transmitted back to the Commission pursuant to the statute, the Commission reconsidered its rate order therein appealed from and made its statutory report modifying said order upon the basis of the additional or different evidence. Such additional or different evidence was not presented by stipulation of the parties or by agreement as claimed by counsel for the Commission. The stipulation in the case occurred upon the record after the Commission had made its statutory report to this court modifying its rate order: and it was, then, stipulated and agreed by counsel that certain additional and further evidence could be considered by the court at that time.

Upon appeal (Michigan Bell Teleph. Co. v. Public Service Commission [1952] 332 Mich 7, 93 PUR NS 367, 50 NW2d 826), the supreme court tested the lawfulness of the rate order by the result and impact of the order as shown by, among other things, the operations of the company for 1946, all of which occurred subsequent to the close of hearings before the Commission on July 11, 1945.

In the case at bar, counsel for the Commission claimed further that the Commission actually did consider all of the additional or different evidence transmitted to it, but concluded that such evidence did not warrant modification or change of its rate order. However, a reading of the statutory report of the Commission shows that the different or additional evidence relating to events occurring subsequent to July 2, 1952, was not weighed and considered by the Commission. The Commission merely determined that such evidence could not properly be considered.

If the view of the Commission on this question were adhered to it would be impossible to test the validity of a Commission rate order as against the claim of confiscation by the actual impact or effect of the order appealed from. Yet, rates are set for the future, Michigan Bell Teleph. Co. v.

Public Service Commission (1946) 315 Mich 533, 66 PUR NS 287, 24 NW2d 200, and in determining a claim of confiscation it is the impact or effect of a rate order with which the courts are concerned. Michigan Bell Teleph. Co. v. Public Service Commission, *supra*, 332 Mich 7, 93 PUR NS 367.

In Michigan Bell Teleph. Co. v. Salmon (1949) 325 Mich 228, 81 PUR NS 599, 38 NW2d 382, the supreme court held that the conduct of a proceeding such as this should be as provided in the applicable statute, that by such statutory procedure the company could bring the record down to date in the proceeding before this court; but, that *after* return of the Commission's statutory report the statute did not authorize the reopening of the matter for further proofs. However, in the case at bar no attempt is made to reopen the proofs a second time *after* the filing of the Commission's statutory report. Instead, the statutory procedure has been scrupulously adhered to.

[3] The next question to be considered by the court is whether the rates and charges prescribed by the defendant Commission have been proved by General Telephone Company of Michigan by clear and satisfactory evidence to be unreasonable and unlawful because confiscatory of its property in violation of its statutory and constitutional rights. In this connection this court is mindful that the order of the Commission should not be set aside unless it appears that the conclusions of the Commission in prescribing the schedule of rates involved were based on insufficient proofs or that the result was as to plaintiff telephone company unreasonable, unlawful, and confiscatory. Michigan Bell Teleph. Co. v. Public Service Commission, *supra*, 332 Mich 7, 93 PUR NS 367. In other words, this court recognizes the "twilight zone" referred to in the case of Detroit v. Michigan R. Commission, 209 Mich 395, 433, PUR1920D 867, 177 NW 306, within which the judgment of the Commission may operate without judicial interference.

After carefully considering the record made in this case, including the transcript of proceedings before the Commission, this court is of the opinion that plaintiff General Telephone Company of Michigan has shown by clear, satisfactory, and convincing evidence that the rates prescribed by the defendant Commission are unreasonable, unlawful, and confiscatory and in violation of its constitutional rights to earn a reasonable return upon the fair value of its property.

[4] The actual earnings of the company for 1952 in the amount of $796,591 produced only 4.23 per cent upon the company's average invested capital for 1952. However, the increased rates granted by the Commission were effective only for the period from December 6 to 31, 1952. If the actual operating results for 1952 are readjusted to reflect for the full year 1952 the amount of the rate increase granted by the defendant Commission as if the same were effective during the whole of said year, and also readjusted so as to reflect for the full year 1952 certain wage increases and tax increases which the company experienced, the company would have earned only 5.5 per cent upon its average invested capital for 1952.

Further, if the actual 1952 opera-

tions of the company are adjusted to reflect for the full year 1952 experienced increases in operating expenses, and also to reflect for the full year 1952, the rates requested by the company in its application to the Commission, the company would earn only 6.59 per cent upon its average invested capital. However, it will be noted that this is slightly under the rate of return the Commission believed it to be allowing when figured upon 1951 operations and investment, for the Commission found in its rate order that the company required net earnings sufficient to return 6.6 per cent upon its invested capital.

The impact and effect of the Commission's inadequate rate relief was to cause General Telephone Company of Michigan to curtail its construction program and to impede its ability to raise sufficient capital to carry on its expansion and improvement program. If such a condition were to continue, not only the company but also the public which it serves would suffer. Unless relief is granted to the company, the confiscation experienced by the company in 1951 and 1952 will continue into the future.

In this connection the court wishes to comment upon the fact that the Commission in its rate order of December 5, 1952, 97 PUR NS 1, as affirmed by its statutory report filed May 25, 1953, fixed rates and charges for the company upon the basis of the company's property and adjusted operations in 1951. However, rates are prescribed for the future. By the time of the Commission's order in December of 1952, *supra,* the company's property devoted to the rendering of telephone service was known by the Commission to have substantially increased as a result of the company's construction program, and it was also known that as new instalments of capital were committed to the company's business the earnings on successive commitments declined. The steady addition or substitution of high cost plant inevitably impairs the earning power of the property as a whole and reduces earnings unless the situation is recognized and remedied. Examples of this are the conversion of common battery or magneto service to dial operations and the program of the company for deloading rural lines.

The defendant Commission and the city of Ludington urge that the question of confiscation cannot be raised by plantiff telephone company because it has failed to separate its intrastate property and earnings from its interstate property and earnings. Although such a separation was not required in the proceedings before the defendant Commission, they urge that in seeking relief of this court the company must make such a separation.

This court has reviewed the cases cited by counsel and is of the opinion that under the facts and circumstances of this case, separation was not mandatory upon the plaintiff General Telephone Company of Michigan. It believes this issue to be controlled by the recent case of Leeman v. District of Columbia Pub. Utilities Commission (DC DC 1952) 95 PUR NS 344, 104 F Supp 553, and the cases therein cited. In any event, in light of the disposition which is hereafter made of this matter, the Commission is free to require separation if it so desires when this matter is remanded to it for further proceedings.

The defendant city of Ludington further claims that plaintiff telephone company is not entitled to relief from confiscation because it urges that any increase of rates (even those granted by the Commission) exceed the value of service being rendered to the company's customers. From its standpoint the city claims it is immaterial whether or not the company is experiencing confiscation because the utility has no right to a reasonable return upon its property unless it is rendering adequate service. In answer thereto the company has claimed that its existing service is adequate but also that a utility cannot be compelled to operate under confiscatory rates on the theory that the value of service furnished is no greater than such confiscatory rates. This question was also presented by the city of Ludington in its separate appeal filed with this court and has been disposed of in simultaneous opinion of this court filed therein. What has been stated in such separate opinion need not be repeated herein but shall be adopted as applicable to this question in the instant cause. Adequate relief to the company cannot be denied by this court upon such basis.

[5] Having determined that the rate order of the Commission is unreasonable, unlawful, and confiscatory, the question of scope of relief to which plaintiff General Telephone Company of Michigan is entitled is presented. The company urges that this court has full power and jurisdiction to vacate and set aside the rates and charges prescribed by the Commission and to allow it to establish and collect reasonable and nonconfiscatory rates and charges under order of this court until such time as the defendant Commission, upon this matter being remanded to it, shall fix and determine reasonable, lawful, and nonconfiscatory rates and charges. On the other hand, defendant Commission and the city of Ludington claim that should this court determine the rate order to be unlawful and confiscatory the court can only require the Commission to conduct another rate proceeding. It is contended that the equitable jurisdiction of the court should stop at this point and that the court is without authority to grant further relief, although admittedly this action would not relieve the company from the burden of unreasonable and confiscatory rates.

This court has made a careful study of the Michigan cases which might be helpful upon this question and believes that the precise or particular question presented herein is a matter of first impression in Michigan.

The court is mindful of § 10 of the Telephone Statute which provides that:

"No person . . . owning telephone lines . . . shall increase any rate . . . under any circumstance whatsoever, except upon an application to the Commission, and a finding by the Commission [after public hearing] that such increase is justified . . . ." (Stat Ann § 22.1450.)

However, § 14 of the statute authorizes the court:

". . . to affirm, vacate, or set aside the order of the Commission in whole or in part and to make such other order or decree as the court shall decide to be in accordance with the facts and the law." (Stat Ann § 22.1454.)

The language quoted in § 10 and the language referred to in § 14 must be construed together. It appears to the court, therefore, that the prohibition of § 10 is designed to prevent an increase of rates and charges by a telephone company without first applying to the Commission and is not, therefore, properly construed as limiting equitable jurisdiction and power which the court may exercise under § 14 in the case of granting relief to protect constitutional rights.

[6] The question presented to this court is whether or not plaintiff telephone company, being entitled to relief from confiscation, must suffer continuous daily confiscation waiting for future possible relief from the Commission. In the case of Monroe Gas Light & Fuel Co. v. Michigan Pub. Utilities Commission, PUR1923 E 661, 669, 292 Fed 139, it was stated:

". . . When the court sees a case of week by week and month by month continuance of confiscation, even if each monthly loss is small, the plaintiff is entitled to his injunction without waiting for possible future relief, —unless for reasons not here present. . . ."

See also Banton v. Belt Line R. Corp. (1925) 268 US 413, 69 L ed 1020, PUR1926A 317, 320, 45 S Ct 534, where the court said:

". . . On the point under consideration, it must be assumed that the joint fare of 5 cents was confiscatory, as alleged. The continued enforcement of that rate would operate to take appellee's property without just compensation, and to compel it to suffer daily confiscation. Notwithstanding the matter was pending on rehearing, the appellee had the right to sue in the federal court to enjoin the enforcement of the rate. It was not bound to await final action by the Commission, and, if the rate was in fact confiscatory, to serve in the meantime without just compensation. . . ."

In a recent case the precise question presented herein was before the Arizona supreme court. Corporation Commission v. Mountain States Teleph. & Teleg. Co. (1951) 71 Ariz 404, 89 PUR NS 111, 228 P2d 749. In this case the supreme court of Arizona not only sustained the right of the trial court to allow the company to establish and collect under bond a temporary rate fixed by it pending the remanding of the matter to the Commission to fix and determine just and reasonable rates, but held that it would have been an abuse of discretion for the court to have refused such relief under the facts and circumstances as presented to it.

And most recently the Indiana supreme court considered the precise question. Public Service Commission v. Indiana Bell Teleph. Co. (1953) — Ind —, 1 PUR3d —, 112 NE2d 751. This Indiana decision followed a prior decision. State ex rel. Public Service Commission v. Marion Circuit Court (1951, 1952) 230 Ind 277, 93 PUR NS 464, 100 NE2d 888, 103 NE2d 214, which should be read in conjunction with the later decision. The Indiana court sustained the action of the Marion circuit court in *temporarily* enjoining the Commission from interfering with a rate fixed by the company under bond, but refused to permit the Marion circuit court to *permanently* enjoin the Commission. The court is of the opinion that the

position of the Arizona supreme court and of the Indiana supreme court in the cases referred to states the general rule to be followed in cases of this kind. This general rule is set forth in Corpus Juris Secundum as follows:

"When rates established by the state or under its authority are set aside or otherwise become of no effect, a public utility has the right to establish its own rates, subject to the ordinary requirements of reasonableness. A rate so established by the utility is in force until it is modified or a different rate is fixed by proper authority." 73 CJS at p. 1010, Public Utilities, Par 15.

If the court acts to set aside rates and charges prescribed by the defendant Commission in its rate order of December 5, 1952, 97 PUR NS 1, and the previous rates of General Telephone Company of Michigan thereby go into effect, it is obvious that instead of immediately improving the situation the court will be aggravating the situation, for certainly if the rates prescribed by said order are unreasonable and unlawful because insufficient, the previous rates which were lower will be even more unreasonable and unlawful. Accordingly, this court finds that it has full jurisdiction and power to grant relief from confiscation and that such power is vested in this court by the telephone statute which grants review of the Commission's rate orders. Michigan Bell Teleph. Co. v. Salmon (1949) 325 Mich 228, 81 PUR NS 599, 38 NW2d 382.

[7] However, this court is mindful of the distinction between permanently enjoining the Commission from interfering with a rate fixed by a utility as distinguished from temporarily enjoining the Commission, State ex rel. Public Service Commission v. Marion Circuit Court, *supra;* Public Service Commission v. Indiana Bell Teleph. Co. *supra.* This matter will be remanded to the defendant Commission to fix and determine just and reasonable rates for General Telephone Company of Michigan in accordance with the findings and holdings expressed herein. Pending action by the Commission in so fixing just and reasonable rates, the company will be permitted temporarily to establish and collect rates and charges no greater than those requested to be approved by the defendant Commission in the company's application of January 22, 1952. The defendant Commission will be temporarily enjoined from interfering with the company's establishing and collecting such temporary rates and charges and from interfering with the company's filing appropriate tariff sheets with the Commission setting forth such temporary rates and charges. However, the company should give good and sufficient bond for the refunding of any charges which might later be determined to be excessive as follows: If lawful and reasonable rates fixed by the Commission are as great or greater than those established and collected by the company during the temporary period no refunds will be required; however, if the Commission shall fix and determine rates which are lower than the temporary rates collected by the company, and said rates fixed by the Commission are lawful, reasonable, and nonconfiscatory, then the difference between the rates collected by the company during the temporary period and said rates prescribed by

the Commission shall be refunded to the company's customers.

In so holding the court wishes to point out that it is not fixing rates or charges of the telephone company nor is the company actually fixing rates and charges which are permanently collected and retained by it. The rate-fixing jurisdiction and authority continues to reside with defendant Commission which acts in a legislative capacity in prescribing rates for a utility. However, the action of the Commission, as of the legislature itself, must be within the constitutional limitations of both the Michigan State Constitution and the Federal Constitution which protect a utility in the earning of a reasonable return upon the fair value of its property.

In reaching the foregoing conclusion the court is not unmindful of the length of time which has elapsed since the company filed its application with the defendant Commission for rate relief upon January 22, 1952. Although hearings were concluded before the Commission on July 2, 1952, the Commission did not act to grant partial relief until December 5, 1952, 97 PUR NS 1. Further, although the statutory procedure involved in a case of this type is designed to accomplish speedy final determination of issues of the character here involved, Michigan Bell Teleph. Co. v. Salmon, *supra*, the Commission in the instant case failed to file its statutory report within the 10-day statutory period but filed it, instead, some six weeks after the receipt of the additional or different evidence by the Commission.

The court has considered all other questions raised by the parties in connection with this case and believes them to be of no controlling importance except as discussed herein.

A decree may enter in conformity with this opinion. Public questions being involved, no costs may be taxed.

MICHIGAN PUBLIC SERVICE COMMISSION

Re Gas Supply and Requirements of Public Utilities Selling Natural Gas

D-3842-53.10
September 9, 1953

INVESTIGATION *of application of service restriction order to natural gas companies; exemption authorized for various services.*

Service, § 146 — Restrictions on gas service — Exemption.

1. Commercial and industrial customers using 500 thousand cubic feet or less of natural gas per month were exempted from a commission order prohibiting gas companies from adding any new customers except domestic service customers, since small commercial and industrial establishments

make up the very heart of the business economy of communities served with natural gas and the commission does not desire to create a situation in which utilities and the commission itself will be involved in a mass of detail with consequent delay and inconvenience, p. 16.

Service, § 146 — Restriction on gas use — Long-range commitments.

2. The commission refused to exempt from an order restricting natural gas utilities from adding new commercial or industrial customers, parties to whom commitments were given for service two years in the future, since general commitment of this duration should not be recognized without a specific showing that some commitment had been made by the customer as well as by the utility and that the customer required a firm assurance of his gas supply in order that his plans might be effectively carried out, p. 17.

By the COMMISSION: The Commission's Order D–3842–53.7 of August 11, 1953 in the above-captioned matter contained, among others, the following provisions:

[1] "1. Until further action by this Commission, no new customers shall be added without prior approval thereof, except that gas may be supplied to new customers, using such natural gas for cooking, water heating, refrigeration, clothes drying, incineration, and incidental commercial purposes not to exceed 5,000 cubic feet per month.

"2. Application for authority to add new customers, not exempted by paragraph 1, shall be made to this Commission, reciting the specific grounds relied on to justify such authority."

The Consumers Power Company has advised us by letters, dated August 21, August 25, and September 9, 1953, of the commitments it has made prior to August 11, 1953, for the sale of commercial and industrial gas to some 226 new customers who will use an estimated 223,200 thousand cubic feet per month. The estimated date for connection for these customers varies from August of 1953 to October of 1955. The individual use of the proposed customers varies from 6 thousand cubic feet per month to as much as 60,000 thousand cubic feet per month. A record provided by the company for the past twelve months showing the new business connected indicates that the present commitments for new business are not out of line with the previous situation.

The above-referred-to letter of August 21, 1953, listed some thirteen customers who had been promised connection in August and whose service was not exempt from the Commission's order of August 11, 1953. In view of the prior commitment by the utility and the immediate need of the prospective customers, the Commission by letter of August 21, 1953, informally approved service to those customers.

After carefully reviewing the record of this utility in attaching new commercial and industrial business, we are of the opinion that public convenience and necessity require service to customers representing small commercial and industrial establishments that go to make up the very heart of the business economy of Michigan communities served with natural gas. It is not the desire of the Commission to create a situation in which the utilities and the Commission will be involved

in a mass of detail with consequent delay and inconvenience to prospective customers. It, therefore, believes that further consideration should be given to the provision in its Order D–3842–53.7, dated August 11, 1953, as to the monthly usage of new commercial and industrial customers that can be served without requiring individual approval by this Commission.

The Petroleum Administration for Defense (PAD), in its order of August 14, 1951, restricting the sale of natural gas, permitted unrestricted sales to commercial and industrial customers using less than 500 therms per day (50 thousand cubic feet) which would be equivalent to approximately 1,500 thousand cubic feet per month. One of the large gas distributing utilities in this state now provides in its rules and regulations, approved by this Commission, that its large industrial customers using 5,000 thousand cubic feet or more annually are subject to proportional curtailment in the event of an emergency or an insufficient supply of gas. This would average approximately 420 thousand cubic feet per month.

After giving this matter careful consideration and noting the character of the proposed usage, the Commission is of the opinion that it would be reasonable to exempt under present circumstances new commercial and industrial sales not in excess of 500 thousand cubic feet per month.

[2] If the commitments of the Consumers Power Company are then reviewed on the basis of exempting all new sales up to and including 500 thousand cubic feet per month, there would remain some fifty new customers with an estimated monthly consumption of 200,287 thousand cubic feet for whom commitments have been made. As previously stated, some of these commitments are not expected to be served until October of 1955, over two years in the future. It does not appear to the Commission that general commitments of this duration should be recognized without specific showing that some commitments have been made by the customer as well as by the utility, and that it is necessary for the customer to have a firm assurance of the gas supply in order that its plans may be effectively carried out.

The Commission, after a careful consideration of the information supplied it in this matter, finds that it will be in the public interest to exempt new commercial and industrial customers of Consumers Power Company using 500 thousand cubic feet per month or less; and, further, that larger commercial and industrial customers for whom commitments were made prior to August 11, 1953, and who expect to use the service prior to September 1, 1954, should be approved for connection.

Now, therefore, it is hereby *ordered* by the Michigan Public Service Commission that the Consumers Power Company may establish service without further approval from this Commission for the following customers:

a. Commercial and industrial customers using 500 thousand cubic feet or less per month.

b. The commercial and industrial customers informally approved by the Commission's letter of August 21, 1953.

c. The commercial and industrial customers using more than 500 thou-

sand cubic feet per month enumerated in the revised list provided this Commission on August 25, 1953, and consisting of some forty-one separate accounts, totaling an estimated monthly use of 145,840 thousand cubic feet per month, which are to be connected prior to September 1, 1954.

It is *further ordered* that except to the extent herein modified all other provisions of Order D–3842–53.7, dated August 11, 1953, shall remain in full force and effect with respect to the Consumers Power Company until further order by this Commission.

EDITOR'S NOTE.—The same decision was made in regard to several other natural gas companies in the following cases: Re Gas Supply and Requirements of Public Utilities Selling Natural Gas, D–3842–53.9, Sept. 9, 1953; Re Gas Supply and Requirements of Public Utilities Selling Natural Gas, D–3842–53.11, D–3842–53.12, Sept. 15, 1953.

FLORIDA RAILROAD AND PUBLIC UTILITIES COMMISSION

Re Florida Telephone Corporation

Docket No. 3743-TP, Order No. 1926
September 1, 1953

APPLICATION *by telephone company for authority to increase rates; denied without prejudice to the right to renew application when the company has improved its service.*

Service, § 123 — Duty to serve — Monopolistic franchises.

1. A telephone company may not pre-empt a section or territory through monopolistic franchises without assuming the obligation of furnishing adequate and efficient service in the territory covered by its operating authority, p. 24.

Return, § 36 — Reasonableness — Quality of service.

2. A telephone company's failure to furnish adequate and efficient service jeopardizes its right to a fair return on the reasonable value of its property devoted to the public service, p. 24.

Rates, § 130 — Reasonableness — Quality of service.

3. The commission may not authorize telephone rate increases if existing rates are already unreasonably high when measured by the quality of service rendered, even though the company may, in fact, be in serious need of additional revenues, p. 24.

Rates, § 130 — Reasonableness — Quality of service.

4. Public utility rates are predicated upon the basis of efficient and adequate service, and where the service is not kept to that standard the rates may be graded downward in proportion to the falling off in efficiency, p. 25.

Rates, § 209 — Unit for rate making — Telephone system.

5. Telephone rates should be fixed on a system-wide basis rather than a local exchange basis, and a penalty reduction for poor service must also be system-wide when imposed in a general rate case and where the complaints run generally throughout the system, p. 25.

Return, § 111 — Telephone company — Inflation.

Statement that a telephone company would be entitled to earn a return of 7 per cent during an inflationary period if the service rendered justified rates which would produce such a return, p. 23.

Return, § 35 — Inflation factor — Rising construction costs.

Statement that the commission has allowed telephone utilities an additional return in order to offset the depressing effect of the high cost of construction on the earnings rate, p. 23.

Return, § 24 — Attraction of capital.

Statement that public utilities must have earnings which will support the financing of necessary growth and expansion, p. 23.

Chairman Jerry W. Carter, Commissioner Wilbur C. King, and Commissioner Richard A. Mack each participated in the hearings and disposition of this cause.

APPEARANCES: C. Farris Bryant and John Marshall Green, Bryant and Green, Ocala, appeared for the applicant; George Dayton and Charles Luckie, Dade City, for the city of Dade City, E. V. Garren, Dade City, for Dade City Chamber of Commerce, Oscar Hetteman, City Manager, Dade City, and Larry G. Hills, L. G. Hills, and Associates, Montgomery, Alabama, protestants; J. B. Rodgers, Rodgers and Kirkland, Winter Garden, for city of Winter Garden and subscribers of Winter Garden, Oakland, and Mt. Verde; W. H. Scovell and Ellis F. Davis, Kissimmee, for city of Kissimmee; Fred C. Snodgrass, St. Cloud, for city of St. Cloud; Wallace E. Sturgis, Sr., and Wallace E. Sturgis, Jr., Ocala, for Board of County Commissioners of Marion County; James Smith, Ocala, for the city of Ocala, protestant; Frank West, Williston, for the city of Williston, protestant; W. F. Mantey, Plymouth, for Minute Maid; Lewis Petteway, General Counsel, and Guyte P. McCord, Jr., Assistant General Counsel for The Florida Railroad and Public Utilities Commission, Fred Pettijohn, Director of Commission's Accounting Department, Roy L. Kearton, Commission Accountant, P. M. Schuchart, Director of Commission's Public Utility Department, and J. M. Rogers and Wilkins Linhart, Engineers for Commission's Public Utility Department.

By the COMMISSION:

I. Nature of Proceeding

This proceeding concerns an application filed in the above-entitled matter by Florida Telephone Corporation on February 2, 1953, for authority to increase its rates and charges now in effect for exchange telephone service and various miscellaneous services furnished by said corporation at Alachua, Apopka, Branford, Bushnell, Cler-

mont, Crystal River, Dade City, Eustis, Groveland, Inverness, Kissimmee, Leesburg, Live Oak, Mount Dora, Ocala, St. Cloud, Tavares, Umatilla, Winter Garden, and Wildwood, Florida. In addition, the corporation has requested authority to put into effect the prevailing group rates for common battery and dial exchanges when and if the following exchanges are converted from magneto to the more modern type service: High Springs, Hastings, Crescent City, Williston, Jasper, Mayo, Lake Butler, and White Springs.

A prehearing conference was held in Ocala, Florida, on February 17, 1953, by a special examiner appointed by the commission for that purpose. Later, the commission held a public hearing on the application herein on March 2nd and 3rd in Ocala. Certain protestants represented by three members of the Florida senate objected to the holding of any hearings during the months of April and May of 1953 while the Florida legislature was in session. Under the Florida statutes, hearings of this kind may not be held if a member of the legislature is participating in the case and he invokes the provisions of said statute. No further hearings were held in this matter until July 6, 1953, except one in Kissimmee on March 19, 1953, which did not involve any member of the legislature. Public hearings were held in Winter Garden on July 6th and in Ocala on July 8th, 9th, and 10th. More than 1000 pages of testimony and 63 documentary exhibits were received by the commission during the course of these hearings. Official notice of these hearings was published in newspapers, printed and circulated in all counties served by the corporation. In addition, notice of said hearings was forwarded by United States mail to the mayors, county commissioners, and chambers of commerce in all cities, towns, and counties served by Florida Telephone Corporation.

II. Corporate Structure and Nature of Operations

Florida Telephone Corporation is a corporation organized under the laws of the state of Florida on October 1, 1925, and as such, is legally qualified to furnish and is engaged in furnishing exchange or local telephone service and intrastate or long distance service in the state of Florida. This utility also, in conjunction with Southern Bell Telephone and Telegraph Company, originates and terminates long-distance telephone messages. Its operations, therefore, are both interstate and intrastate in character. No separation of the corporation's investment, revenue, and expense accounts between these two classes of service has been presented in this case by the utility. At most only a small proportion of the utility's business is interstate in nature and the commission feels that such a separation would have little effect on the over-all picture and would not justify the time and expense which such an undertaking involves.

III. Basis of Application for Increased Rates

The application of Florida Telephone Corporation for increases in its general schedule of exchange rates and charges is based primarily upon the assertion that the utility's level of earnings and rate of return has been in a downward trend since 1950, to the

extent that its increases in net operating income in 1951 and 1952 have been substantially less than the very substantial increases in interest and carrying charges on the large amounts of securities sold in the same 2-year period. The application sets forth that the utility over the past seven years has been engaged in an unusual and abnormal degree of expansion, involving a very substantial amount of gross construction and financing. During said period of time the applicant's gross investment has increased approximately 388 per cent and its invested capital approximately 336 per cent. The utility contends that it must step up its construction program if it is to meet its obligation to furnish telephone service to the public in its territory and that its decreasing level of earnings coupled with ever increasing costs of money and operating expenses make it necessary for said utility to adjust its rates and charges upward in order to obtain the earnings required to support further expansion and improvements.

IV. Service Complaints

The file in this docket is filled with complaints about antiquated, poor, inadequate, and inefficient service. These complaints are from almost every section served by the applicant and run the entire gamut of conceivable telephone disorders. Many of these complaints are from individual subscribers, some are from organizations such as chambers of commerce, and the more formal ones are from the governing bodies of cities, towns, and counties.

The city of St. Cloud filed a formal complaint charging Florida Telephone Corporation with rendering inadequate and inefficient telephone service in and around said municipality and requesting that the present rates be reduced commensurate with the type of service being rendered.

The city of Winter Garden filed a formal complaint charging that the quality of service being rendered to the public in said municipality did not justify present rates and requesting appropriate reductions in said rates.

The city of Williston filed a formal complaint charging that present rates are excessive and unfair because of the antiquated telephone facilities provided in said municipality and the resulting inefficient service.

The city of Kissimmee filed a formal complaint charging the applicant herein with a long list of inefficiencies, poor service, neglect, and improper charges, and requesting appropriate reductions in applicant's general exchange rates and charges.

Formal resolutions complaining about service and facilities were also filed by many other cities and counties but it would serve no useful purpose to multiply these illustrations of public dissatisfaction.

While some cities, such as Ocala and Dade City, filed no formal complaints, they were represented at the hearings by counsel and actively opposed the proposed increases. Marion county also was represented by counsel and was one of the leading protestants at the hearings.

The nature of these many complaints does not appear to have changed very much from those heard by the commission in previous cases involving this utility. They have merely multiplied in number and the com-

plaining parties have become somewhat more dissatisfied and discouraged.

We will discuss this question of poor service and its impact on a rate case of this kind later in this order.

V. The Rate Base

The utility has selected the twelve months ended December 31, 1952, as the test year from which its statistical evidence and exhibits are taken in support of the proposed increases in its general schedule of rates and charges. The commission has accepted the twelve months ended December 31, 1952, as the period for testing the earnings of Florida Telephone Corporation in this proceeding.

The utility has employed a rate base of $5,854,816 to demonstrate that its earnings are insufficient. This rate base was obtained by taking the telephone plant in service at the end of each month beginning with December 31, 1951, and ending with December 31, 1952, and dividing the total thereof by 13 to get the average plant in service for the constructed year. To this average the utility then added the average telephone plant under construction (obtained in the same manner) in the sum of $683,096 and average materials and supplies on hand in the sum of $419,847. From this total the utility then deducted the average depreciation reserve for the constructed year in the sum of $937,833 leaving the rate base of $5,854,816.

We have not accepted the utility's proposed rate base. It is our opinion that a rate base of $5,479,415 is the proper one to be used in this case and will be fair to the utility, its investors, and subscribers, and gives recognition to every dollar invested in the property used and useful in rendering the public service. We have arrived at this rate base in the following manner: From applicant's Exhibit 15–C we have taken the average telephone plant in service in the sum of $5,689,706 to which we have added the average increase in plant investment brought about by the Ocala conversion in the constructed year in the sum of $434,-639. To this we have also added the sum of $15,960 which represents the cost of increases in number of stations from December 31, 1952, to May 31, 1953, at Ocala, to give effect to the impact of these additional telephones on applicant's earnings on the theory that they were made available by the Ocala conversion. From the resulting total of $6,140,305 we have deducted $873,377 average reserve for depreciation and $681 for additional depreciation in connection with the additional telephones at Ocala. To the net average plant investment thus obtained in the sum of $5,266,247 we have added $90,362 allowance for cash working capital and the sum of $122,-806 allowance for materials and supplies thus arriving at our rate base of $5,479,415. In our opinion this is the reasonable value of the property upon which the utility is entitled to earn a fair return and gives full consideration to the stipulations entered into at the prehearing conference. For that reason, we do not feel that it is necessary to discuss the various items such as cash working capital, materials and supplies, and telephone plant under construction.

VI. Rate of Return

Several years ago we allowed this

utility a rate of return of 6 per cent on a rate base somewhat similar to the one we have approved in this case. Since then, however, the cost of money has increased considerably and other elements have entered into the utility field of operation and finance which make such a return inadequate for a utility rendering an efficient and adequate telephone service in a fast growing section of the state. It is our opinion that the applicant, during the economic situation which presently prevails throughout the country, would be entitled to earn a return of 7 per cent per annum upon the rate base hereinbefore found to be reasonable if the service rendered by it justified rates and charges which would produce such a return. We have previously allowed other telephone utilities an additional return in order to offset the depressing effect of the high cost of construction on the earnings rate. A similar allowance should be made in this case. In the present case the current high cost of construction during the year ended December 31, 1952, increased the average station investment from $269.44 to $274.29 or a percentage increase of 1.80 per cent. Applying this percentage to the 7 per cent return, herein found to be fair and reasonable, would give the utility a further return of .13 per cent or a total return of 7.13 per cent.

We have consistently taken the position that public utilities operating in Florida must have earnings which will support the financing of necessary growth and expansion. Public utilities in this state are under dual statutory obligation; first, to render an efficient service to present subscribers and, second, to provide service upon demand to all those reasonably entitled thereto. It is of course difficult to determine which is the paramount obligation, and yet, Florida cannot continue its unprecedented growth, industrially and otherwise, unless her public utilities equip themselves so that they can meet the demands for more and more service in an expanding economy. It would be a short-sighted regulatory policy and a disservice to the public, generally, to hold public utility earnings to such a low level as to discourage and retard necessary growth and expansion. Under such a policy the resulting savings to present subscribers would be far more than offset by the irreparable damage which would result to the over-all growth and prosperity of the entire state. We are committed to a rate-making policy both by inclination and necessity which will not only support but encourage the continued growth and prosperity of all sections of Florida so long as that can be done without imposing unreasonable and exorbitant rates upon the public.

VII. Revenue Requirements

The applicant had, according to its Exhibit 12–A, Page 1, Column 1, an adjusted net operating income of $307,496 for the constructed year ended December 31, 1952. This should be further adjusted by adding thereto the sum of $6,258 which represents additional net operating income due to increased number of stations at the Ocala exchange as of May 31, 1953, which were made available by the Ocala conversion. Thus, the applicant's adjusted net operating income for the test period was $313,754. In order to earn a return of 7.13 per cent

the utility would require a net operating income of $390,682 for said test period. Its adjusted net operating income was, therefore, $76,928 less than the amount to which it would have been entitled under the terms of this order. Because of federal income tax requirements, it would be necessary for the utility to have additional gross revenue in the sum of $160,015 to obtain the additional net operating income of $76,928. In order to produce the additional gross revenue of $160,015 its exchange revenue for the constructed year would need to be increased 18.359 per cent. Were it not for other considerations which must be recognized and are controlling in this case, our finding would be that applicant's revenues from its exchange rates and charges should be increased by 18.359 per cent.

VIII. Effect of Poor Service on Right to Fair Return

[1–3] If we were concerned with nothing more in this proceeding than the determination of the utility's revenue requirements, our problem would be greatly simplified. However, we are confronted here with a serious question concerning the quality of service which is being rendered by the utility in question. These are not the usual complaints that we hear in rate cases. They are considerably more serious and far-reaching and have a most discouraging significance when viewed in the light of applicant's assertion that its gross investment has increased approximately 388 per cent during the past seven years. Complaints about inadequate and inefficient service throughout applicant's entire system have become chronic through the years. As far back as 1947, we found it necessary to criticize this utility severely for the type of service it was rendering to the public.

In October, 1947, we reduced applicant's rates at its Apopka exchange 25 per cent because of the poor service rendered the public through its facilities in that municipality.

In 1948, we denied an application for increased rates by this utility purely upon the basis of the poor telephone service rendered throughout its system. Later we granted an increase with the hope that the additional revenues which would accrue to the utility would be translated into improved service to the public. The record in the present case does not support the soundness of that hope nor does it lend much encouragement for the future.

Of course, some improvement has been noted from time to time at a few individual exchanges; still the utility has not achieved throughout its system and in its various exchanges the standards of service desired by the commission and to which the public is entitled. This commission will not tolerate the continued inadequate and inefficient service which this utility has been rendering during the past several years. If this utility desires to improve its financial situation, then its management must make some drastic improvement in its operating efficiency. Rate increases are not always the answer to a utility's financial problems.

Adequate telephone and communication facilities and services are of paramount importance to the economy of a fast developing community or territory. Important business transactions

depend in a large measure upon the accessibility of adequate communication facilities. Social intercourse requires a dependable telephone service. The public welfare depends upon the ability of the citizens to communicate with each other through modern methods with the least possible inconvenience and delay. A telephone utility cannot pre-empt a section or territory through monopolistic franchises without assuming the obligation of furnishing adequate and efficient service in the territory covered by its operating authority. Failure to meet such obligation in a reasonable manner jeopardizes the utility's right to a fair return on the reasonable value of its property devoted to the public service.

This commission has certain obligations and responsibilities in exercising its rate-making authority. We cannot, in law or in good conscience, authorize increases in utility rates when existing rates are already unreasonably high when measured by the quality of service rendered even though the utility may, in fact, be in serious need of additional revenues.

IX. Penalty Reductions Offset Justifiable Increases

[4, 5] Were we to authorize a rate increase in this proceeding, which would give the utility a return of 7.13 per cent on the rate base herein found to be reasonable, we would at the same time be forced to impose upon the utility a penalty reduction in its general exchange rates system-wide commensurate with the type and quality of service presently being rendered to the public by said utility.

The statutes of Florida require public utilities to render efficient service. Rates for public utility services are predicated upon the basis of efficient and adequate service and where that service is not kept to that standard, then the rates charged may be graded in proportion to the falling off in efficiency.

The 1953 Session of the Florida legislature enacted Chapter 28013 which requires all telephone companies to secure certificates of public convenience and necessity which then gives the utility the exclusive right to furnish telephone service in the territory covered by the certificate. However, the statute also provides that the commission may grant a competitive certificate if it finds that existing facilities are inadequate to meet the reasonable needs of the public or that the existing certificate holder is unable to, or refuses, or neglects to provide reasonably adequate service.

It would serve no useful purpose to prolong this discussion of the applicant's legal obligations to furnish an adequate and efficient telephone service and its failure to meet these obligations. While it might be argued that the service rendered at some of applicant's individual exchanges is commensurate with the rates charged or even with the proposed rates, nevertheless we are engaged here in a system-wide rate case and this record will not permit the fixing of rates by individual exchanges. Such an undertaking would require time-consuming and expensive separations, allocations, and apportionments as to investments, revenues, and expenses. We are not equipped either with finances or personnel to cope with the monumental task of fixing rates by local exchanges. Our approach through necessity must

be system-wide. Penalty reductions for poor service must also be system-wide when imposed in a general rate case and where the complaints run generally throughout the system.

A penalty reduction of 25 per cent in applicant's general exchange rates and charges would appear to be justified on the basis of the quality of service presently being rendered.

It is our conclusion that the applicant's net earnings on the basis of presently existing rates are already somewhat in excess of what they would be if the application herein should be granted and a penalty reduction of 25 per cent immediately imposed as indicated.

X. Findings of Law and Fact

Based upon the entire record herein, the commission finds that:

(1) A rate base of $5,479,415 represents the reasonable value of applicant's property used and useful in rendering telephone service and upon which it is entitled to earn a fair return.

(2) A return of 7 per cent, plus an additional return of .13 per cent to take care of the depressing effect of the current high cost of construction on the earning rate, making a total rate of return of 7.13 per cent on the rate base herein found to be reasonable is fair, reasonable, and compensatory and should be allowed if applicant's quality of service warranted rates and charges which would produce such a return.

(3) In order to produce a return of 7.13 per cent as aforesaid, applicant's general exchange revenue should be increased by the gross amount of $160,015 or 18.359 per cent.

(4) The quality of the service presently being rendered by applicant throughout its system will not justify rates and charges which will produce the return which we have found to be fair and reasonable. A penalty reduction of approximately 25 per cent in applicant's general exchange rates and charges would be fair and reasonable in view of the inadequate and inefficient service presently being rendered by applicant.

(5) On the basis of applicant's operating statistics, it is entitled to an increase of 18.359 per cent in its general exchange revenue. However, on the basis of the poor service being rendered, applicant should suffer a penalty reduction of approximately 25 per cent in its general exchange revenue. The granting of the one and the imposition of the other simultaneously would give the utility earnings slightly less than it now receives under present rates. The application, therefore, should be denied without prejudice to applicant's right to renew the same when it has brought its service up to the standard required by the commission and to which the public is entitled and upon which fair and reasonable rates are predicated.

XI. Order

Now, therefore, in consideration thereof, it is *ordered, adjudged,* and *decreed* by The Florida Railroad and Public Utilities Commission as follows:

(1) The findings of law and fact as hereinbefore set forth, together with the discussion of the various elements and factors involved as contained in the body of this order, be and the same are hereby approved in every respect.

(2) The application of Florida Tele-

phone Corporation for an increase in its general exchange rates and charges be and the same is hereby denied without prejudice, however, to the right of said utility to renew said application when it has improved its service to the standard required by this commission and to which the public is entitled.

INDIANA PUBLIC SERVICE COMMISSION

Ike L. Scarborough et al.

v.

General Telephone Company of Indiana, Inc.

No. 24162
September 17, 1953

PETITION *by subscribers of telephone company for reinstatement of rate suspension order; approved.*

Rates, § 130 — Suspension — Service inadequacies.

1. An order suspending rates for certain exchanges of a telephone company was reinstated where the evidence showed that the company was still rendering inadequate and insufficient service, despite the fact that the company had already undertaken and completed some proposed improvements, p. 31.

Rates, § 130 — Telephone company — Service in relation to rate increases.

2. Reasonable and adequate service must be furnished before a telephone company is entitled to collect rates from its subscribers, particularly where such rates are higher than those formerly charged for the same service, p. 31.

Rates, § 653 — Previous schedule — Effect on later determination.

3. A determination that a rate schedule is reasonable as of one date does not bind the commission to consider that schedule reasonable at some future date, p. 31.

Rates, § 83 — Rate order suspension — Power of commission to reinstate.

4. The commission has authority and power to reinstate a rate suspension order upon a showing that service has not been sufficiently improved to warrant an increase, p. 31.

APPEARANCES: Frederick E. Rakestraw, Attorney at Law, Akron, for the petitioners; Stuart, Devol, Branigin & Ricks, Attorneys at Law, Lafayette, for the respondent; James T. Robison, Public Counselor, Indianapolis, for the public.

By the COMMISSION: On the 24th

day of December, 1951, in Docket No. 22976, the Public Service Commission of Indiana approved a system-wide increase in rates in certain towns served by the General Telephone Company of Indiana, Inc. By the terms of said order the rates authorized therein were ordered to become effective on January 1, 1952, except in so far as they affected some 35 exchanges of the General Telephone Company of Indiana, Inc., which were by the commission on that date found to be not furnishing reasonable and adequate service to the subscribers thereof. Among the exchanges in which the rates were so suspended was the exchange located at Bippus, Indiana. Again on November 7, 1952, the commission issued its order in this same cause increasing the rates and charges of the petitioner General Telephone Company of Indiana, Inc., and lifting the then existing suspension of rates as to the Bippus, Indiana, exchange, and ten other exchanges in which the commission on that day found that adequate telephone service was being rendered. Said order of November 7, 1952, reads in part as follows:

"The commission further finds that the rates in the following exchanges are still under suspension: Bippus (and 30 other exchanges). The petitioner has certified to the commission 13 additional exchanges in which it states that the service is now reasonably adequate and requests that the commission lift the suspension. These exchanges are as follows: Bippus (and 12 other exchanges). The engineering department of this commission has re-examined the 13 exchanges listed above and has come before the commission to explain their inspections. It is the opinion of the commission that the suspension should be lifted on all exchanges except the exchanges at Wheeler and Cicero. . . . The engineering reports on the 11 exchanges found to be in good condition, indicated that the company has spent on capital charges an amount of $241,705 in the maintenance account, and an amount of approximately $50,000 since the last order was issued by this commission . . . . In all of the above exchanges in which the suspension will be lifted, it is not the intention of the commission to lift the suspension on any lines having more than ten subscribers attached, but that at such time as the company is able to reduce the number of subscribers on any line to ten or less, it will be authorized to charge the prevailing rate for this service."

The effect of this order of November 7, 1952, was to permit the General Telephone Company of Indiana, Inc., to apply the new rates authorized in the order of the commission dated November 7, 1952, to the Bippus exchange except in so far as the rates would apply to consumers upon lines where there were ten or more stations.

On May 7, 1953, a petition was filed by Ike L. Scarborough and more than one hundred other subscribers to the Bippus exchange alleging:

1. That the Public Service Commission of Indiana had on November 7, 1952, without notice or public hearing lifted the suspension of rate increases ordered on December 24, 1951, with respect to the patrons of the Bippus, Indiana, exchange, and

2. That little improvement had been made in the equipment and the plant at

such exchange since December 24, 1951, and

3. That much of the equipment in said exchange remained obsolete and in poor repair, and

4. That the telephone service rendered at such exchange remained unsatisfactory and that much of the telephone transmission is poor and noisy and inadequate, and

5. That there were frequent delays in the service.

Petitioners prayed that upon hearing the General Telephone Company of Indiana, Inc., be ordered to render reasonably adequate service in the Bippus exchange area and that the commission reimpose the suspension on the increase in telephone rates which was granted December 24, 1951, and succeeding telephone rate increases in the area until such time as the General Telephone Company of Indiana, Inc., could render reasonable and adequate service in the exchange area. To this petition the General Telephone Company of Indiana, Inc., filed an answer which denied that the service being rendered by the company was inadequate and in addition thereto contended that the petitioners had no right to question the reasonableness of the rates and charges for the telephone service in this proceedings and that the commission had no right to question the orders of the prior commission entered in causes numbered 22976 and 23505 since no appeal had ever been taken therefrom. It was further contended by the telephone company that if the petitioners desired to inquire into the reasonableness of the existing rates and charges, they would be required to do so by a separate petition filed for that purpose raising only the issue of the reasonable rates and service; and that this was an issue distinct and separate from the local service in said exchange. Upon the filing of this petition by Ike L. Scarborough et al., the commission determined that a public hearing should be held to determine and resolve the questions contended for on behalf of the telephone company and upon the part of the petitioner. The matter was, therefore, set for hearing at the office of the commission on the 24th day of June, 1953. Prior to the opening of said hearing the attorneys for The General Telephone Company, Inc., requested a continuance of said cause and upon the presentation of this request the commission gave further consideration to the matters set forth in the petition and determined that it would be advisable to have a field hearing on the matter and determined further that such hearing should be held in the Bippus High School at Bippus, Indiana. It, therefore, directed that notice of the time and place of said hearing be given as provided by law and pursuant to such direction notice of the time and place of hearing was given by publication in the Huntington News on June 15, 1953, and in the Huntington Herald Press on June 15, 1953, both of said newspapers being newspapers of general circulation printed and published in the English language in the county of Huntington, in which is located the Bippus exchange of The General Telephone Company of Indiana, Inc. Notice of the time and place of hearing was also given by publication in the Lafayette Journal and Courier on the 15th day of June, 1953, and in The Lafayette Leader on the 19th day of June, 1953. Both of these last-named

newspapers are newspapers of general circulation printed and published in the county of Tippecanoe, state of Indiana, wherein is located the home office and general office of The General Telephone Company of Indiana, Inc. Pursuant to the notices above described a public hearing was held in the Bippus High School at Bippus, Indiana, on Tuesday, July 21, 1953.

At such hearing the petitioner appeared by its attorneys and the public was represented by the public counselor of the state of Indiana and The General Telephone Company of Indiana, Inc., was represented by its attorney, all of which more fully appears by appearances set forth in the caption of this order.

The commission conducted said hearing in accordance with law, heard all the evidence there presented, heard the arguments of counsel, and upon conclusion of the submission of the evidence requested that briefs be submitted to the commission for its consideration. Pursuant thereto briefs were submitted by the counsel for the company and by the counsel for the petitioners. The commission heard all of the evidence, the arguments of counsel and, having reviewed the briefs filed in the cause, and being duly advised in the premises, now sets forth its finding relative to said proceedings and to the suspension of rates and the lifting thereof in the exchange at Bippus, Indiana.

1. The commission finds that ten prominent citizens of Bippus, Indiana, and its environs, testified that the service being rendered by the respondent company in the Bippus exchange was grossly inadequate. Some of the witnesses testified that the service leads to their residences or places of business were allowed to sag so low that it was impossible to pass under the lead lines with agricultural equipment or with ordinary vehicles; that in many instances it was impossible for service vehicles to enter the grounds or yards of subscribers because of the low hanging wires; in many cases the witnesses testified they were unable to get any reception upon their telephone instruments and were unable to get Central. Great complaint was made of an inability to place long-distance calls through the toll center used by the Bippus exchange. Many of the complaints were regarding cross-talk which occurred on their various lines. The testimony of the ten witnesses was substantiated and corroborated by approximately twenty-five subscribers who entered their names in the record of this cause and stated under oath that their testimony would corroborate that of the ten witnesses who had previously testified.

The company, on the other hand, presented evidence through its area traffic supervisor and through its plant supervisor and through its vice president, to the effect that everything was being done by the company that they felt could be done to improve the adequacy of the service in the exchange. Mr. Christianson, the vice president of the telephone company testified that Bippus was scheduled in the program of the company to be converted to a dial operation in 1955. The area traffic supervisor and the plant supervisor testified that some improvements had been made in installing additional toll circuits out of Bippus and in the increasing of the number of toll positions upon the board and also in

the employment of maintenance crews in the Bippus exchange area. Mr. Charles F. Parrett, in this latter connection, testified that more than 229 new poles had been set in an eight weeks' period; that in all, 272 poles of 13 miles of wire had been installed in the Bippus exchange since the suspension order was entered, and that a tree trimming program which cost the company $13,000 had been completed or carried forward as far as possible.

[1–4] From this evidence the commission is of the opinion and finds that even with the improvements undertaken and completed by the respondent company the telephone service at and in the Bippus exchange area is as of this date inadequate and insufficient to satisfy requirements of the public in and about this area.

2. The commission further finds that the furnishing of a reasonable and adequate telephone service by a telephone utility is a condition precedent to the collecting by the said telephone company from its subscribers of telephone rates particularly upon an increased basis over those which had previously been collected by the company from such subscribers. The commission is further of the opinion and finds that the subject of reasonable rates and charges by a public utility is constantly before the Public Service Commission of Indiana and that said commission should at all times consider evidence concerning the reasonableness and adequacy of the service being rendered. That the determination of a fair, just, and equitable schedule of rates and charges as of one date does not necessarily bind the commission to follow such determination or consider that such determination shall be reasonable and just as of any future or subsequent date.

The commission, therefore, finds in the connection that the petition filed in this cause is proper and adequate and that it has jurisdiction of the subject matter thereof and has the authority and power to grant the relief therein prayed.

3. The commission further finds that the suspension of rates originally imposed upon this exchange of the General Telephone Company of Indiana, Inc., was properly imposed and that said suspension should have continued in full force and effect and should not have been lifted by the Public Service Commission of Indiana at the time of the entry of its order on the 7th day of November, 1952. That the lifting of said suspension on said date was based on an erroneous assumption on the part of the public service commission; that the service being rendered to the patrons of the Bippus exchange was reasonable and adequate at that time; that this erroneous assumption was based upon the testimony or certification of a member of the engineering staff of this commission, and that said recommendation or certification was poorly considered and ill advised and that said suspension should not in the public interest have been lifted on said date.

4. The commission further finds that the improvement of the service rendered in the Bippus exchange area since the date of the original suspension of the rates applicable thereto has not been sufficient to warrant or justify the public service commission of Indiana in lifting said suspension. And the commission further finds that said

suspension should be continued in effect until a further showing is made that the improvements contemplated have been made and have improved the adequacy of the service to the extent where that service being rendered is reasonably adequate, taking into consideration the area to be served. And it will be so ordered.

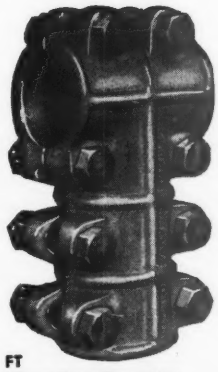
It is, therefore, *ordered* by the Public Service Commission of Indiana that the suspension of rates ordered by the commission in Docket Number 22976 in so far as the same apply to the Bippus, Indiana, exchange of said company be and are hereby reinstated and are continued in effect so suspended until such time as improvements in the service rendered to the patrons of this exchange is fully accomplished.

It is *further ordered* by the commission that the order of the public service commission entered on the 7th day of November, 1952, in so far as it lifted such suspension be set aside and held for naught as of this date and that said order be amended so as to reinstate the suspension heretofore ordered lifted.

It is *further ordered* by the commission that The General Telephone Company of Indiana, Inc., shall within fifteen days from the entry of this order filed with the commission new and separate schedules which shall apply to the Bippus, Indiana, exchange and that those schedules shall be in no case greater than the schedules prevailing prior to the rate increase granted by the commission in Causes Numbered 22976 and 23505.

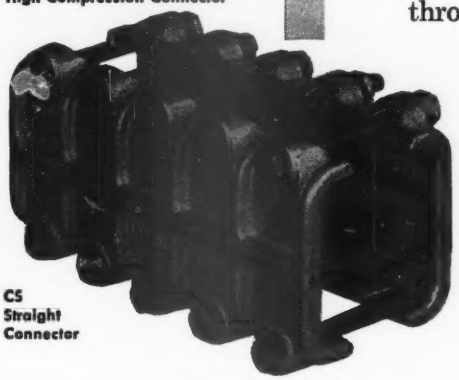
It is *further ordered* by the commission that General Telephone Company of Indiana, Inc., shall pay into the treasury of the state of Indiana through the secretary of this commission the sum of $149.06, said sum being itemized as follows:

Engineering Costs	$121.55
Advertising Cost	27.51
Total	$149.06



FT
Clamp Type Connector

TU
High Compression Connector



CS
Straight
Connector

DELTA-STAR builds a COMPLETE LINE of POWER CONNECTORS

Whatever your requirements there is a Delta-Star connector designed specifically to do the job. Never is there any necessity of adapting a connector to your particular application; there is available at Delta-Star the exact connector you require in clamp or solder type with all the characteristics that have won such general acceptance throughout the industry.

Delta-Star clamp type connectors incorporate the three essential requirements of positive electrical and mechanical connection, ease of installation, and continuity of service over long periods of time.

DELTA-STAR ELECTRIC DIVISION

H. K. PORTER COMPANY, INC.
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Develop maximum power with LEFFEL hydraulic turbines

Only time will tell the story of how good a hydraulic turbine really is —and Leffel turbines are already thoroughly time-tested, in scores of installations where they have been going strong for decades without need of repair.

Leffel turbines are so expertly planned, so carefully and precisely built that you can be sure of trouble-free efficiency for a long, long time. Leffel pays special attention to the conditions under which the turbine is to be used, and maintains a friendly interest in the turbine's performance after installation.

If you have a water power problem, entrust it to Leffel's hydraulic engineers — real experts in the water power field. Put Leffel's 91 years of hydraulic power experience to work for you—now.

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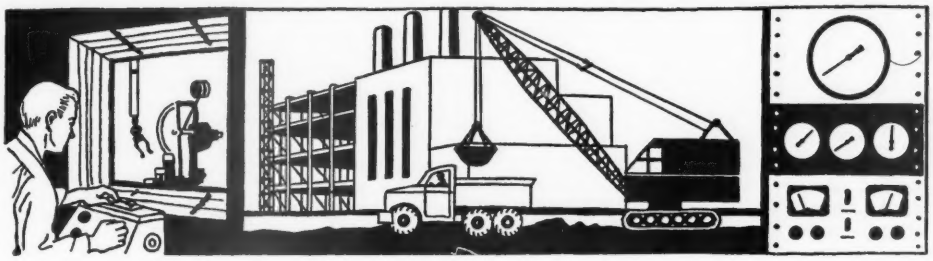

Industrial Progress

ouisville Gas & Electric to Build $13,815,000 Unit

UISVILLE Gas & Electric Com- y plans to install a second 100,- -kilowatt generating unit at its e Run plant.

ost of the steam-operated unit will $13,815,000. The cost of the first t plus the plant was about $15,- 0,000.

onstruction on the plant and first t started April, 1952, and the unit xpected to go into operation in late mer of 1954. Work on the second t will begin immediately, and will e about two years.

ltimate plans call for six of the erators at Cane Run to be installed he need for more electricity arises expanding Louisville.

United States Has 57% of World's Telephones

TH 57 per cent of all the tele- nes in the world, the United States eight times as many as the next hest nation, the United Kingdom, also more per capita than any er country.

World-wide statistics compiled by American Telephone & Telegraph mpany reflect the situation as of uary 1, 1953, when the United tes had 48,056,308 telephones in vice. The United States total has n about two million since then, the mpany said, noting this country's -millionth phone was installed in vember in the White House.

Totals for other countries that have e than a million telephones are: United Kingdom, 5.9 million; Canada, 3.3 million; West Germany, 3 million; France, 2.6 million; Japan, 2.2 million; Sweden, 1.9 million; Italy, 1.5 million; Australia, 1.3 million; Switzerland, 1 million.

On a per capita basis, the United States has 30.3 phones for each 100 inhabitants, Sweden 26.4, Canada 22.9, Switzerland 20.9, New Zealand 20.9, Denmark 18.1, Australia 15.3 and Norway 15.1 No other country has as many as 15 per 100.

Virginia Electric to Build $1,700,000 Line

VIRGINIA Electric & Power Company will install a $1,700,000 transmission line between its Portsmouth, Va., generating plant and Hickory, a village in Norfolk county. Function of the new line is to provide better electrical service to industrial plants and to give extra power to the Navy's new radio communication center at Northwest, another village in the county.

All Weather Housings for Mobile Radio Equipment

STURDY steel housings to protect RCA Carfone and Fleetfone mobile radio communications equipment from the elements and from mechanical abuse were announced recently by the RCA Victor Communications Equipment Section.

The new outdoor housings are especially designed to protect the mobile transmitter-receiver units on vehicles where trunks or other protected compartments are not available to hold the equipment. Complete protection is offered in installations on such vehicles as emergency mobile apparatus, and service and utility vehicles.

G-E Bulletin on Portable D-C Indicating Instruments

A NEW bulletin on portable d-c indicating instruments has been announced as available from the General Electric Company, Schenectady 5, New York.

Designated GEC-979A, the 8-page illustrated publication provides information on the applications, features, prices and performance of the company's Type DP-11 and DP-12 instruments.

Georgia Pwr. Donates $25,000 for 4-H Farm Electrification Bldg.

A $25,000 farm electrification building, a gift from the Georgia Power Company, will be constructed at the Georgia 4-H Club Center which is being developed near Eatonton.

The building will house electrical equipment to be studied by 4-H boys and girls as a part of their educational program. The power company's $25,000 donation actually means a

(*Continued on page* 28)

$50,000 contribution to the center since the state will provide $25,000 in accordance with its policy of matching gifts from private sources.

Harllee Branch, Jr., president of the Georgia Power Company, said the farm electrification building will be named in honor of Charles A. Collier, vice president and director of the company and a veteran of 44 years of service. Mr. Collier pioneered the company's farm electrification program and was responsible for its policy of coöperation with the 4-H Clubs and other farm groups, including the company's sponsorship of hybrid-corn and farm and electric contests among 4-H Club members. Mr. Branch said the directors of the power company in approving the $25,000 contribution expected the project to stimulate a greater use of electricity on Georgia farms.

The Charles A. Collier Farm Electrification Building will consist of three main demonstration and assembly rooms. One will be devoted to electrical devices used in farm operations. A second room will be devoted to electrical kitchen appliances. The third room will contain laundry equipment, pumps, motors, television and radio sets and small appliances. Nationally known manufacturers of electrical appliances will equip the farm electrification building.

Arkansas Louisiana Plans $9,245,166 Project

THE Arkansas Louisiana Gas Company, Shreveport, La., has asked the FPC for authority to build a $9,245,166 project to expand its gas deliveries 28 per cent by 1956.

The project would consist of 107 miles of pipeline and other facilities on the company's gas transmission system which covers most of northern Louisiana, part of Arkansas, and a small area in east Texas.

New Communications Service Manager Named by Motorola

DANIEL E. NOBLE, vice president in charge of Motorola's Communications and Electronics Division, recently announced the appointment of John P. Tansey to the position of national service manager of that division. Mr. Tansey succeeds F. Schnell who has been designated assistant to the vice president.

Westinghouse Names Switchg Division Executives

TWO executive appointments in Switchgear Division of Westingh Electric Corporation were annou recently by M. H. Dobbs, divi manager.

C. P. West is named assistan the manager, Switchgear Division A. Johnson is appointed manager the division's engineering dep ment.

AGA Laboratories Break Ground for Addition

CONSTRUCTION has begun on addition to the American Gas A ciation Laboratories at Clevela Ohio, at an estimated cost of $200,0 according to Edwin L. Hall, labo tories director.

Scheduled for completion dur 1954, the completed project will p vide additional facilities to be devo

(*Continued on page* 30)

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underground?

SEE how great a job it does with special equipment and riggings in utility service. Saves valuable minutes of time because it really maneuvers into position, even where going is roughest. More weight up front... wonderful visibility and safety.

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UTILITIES everywhere tell this same story of efficiency and time-saving when they talk about the White 3000.

It does more work...in less time...at substantial savings.

It's *right* on the job because it's *tailored* to the job.

Find out today, how the White 3000 can help your transportation efficiency now... and for years to come. See your White Representative.

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Cleveland 1, Ohio

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INDUSTRIAL PROGRESS
(Continued)

exclusively to the handling and
proval testing of gas appli
Rapid growth of the gas utility
appliance manufacturing indust
recent years has made this expa
necessary.

North Dakota Natural Gas P
$12,500,000 Pipeline

NORTH Dakota Natural Gas
pany, St. Paul, Minn., has applie
permission to build and operate a
mile $12,500,000 natural gas pip
in North Dakota.

The company has concluded a
tract with Amerada Petroleum
of Tulsa, Oklahoma, to purcha
million cubic feet of gas daily
Beaver Lodge and Tioga oil fiel
western North Dakota, sales to
mence in the fall of 1954.

North Dakota Natural propos
serve only North Dakota cities
the present, planning to lay 12
10-inch trunk lines with six-inch
ers from Tioga, North Dakot
Minot, Fessenden, Devils Lake, G
Forks, Fargo, Jamestown, and
peton.

Sweatt Elected Chairman
Honeywell Board

HAROLD W. SWEATT, presi
of Minneapolis-Honeywell Regu
Company since 1934, was rec
elected chairman of the board,
ceeding Mark C. Honeywell, who
named honorary chairman.

Paul B. Wishart, vice president
general manager of the company,
elected to succeed Mr. Sweatt
president.

First Telephone-Cable Acro
Atlantic Planned

PLANS were disclosed recently
the first telephone cable system ac
the Atlantic, a $35,000,000 projec
which 2,300 miles of cable will be
at depths of three miles on the oc
floor.

The Long Lines Department of
American Telephone & Telegraph
said the cable will supplement
short wave telephone circuits now
use between the United States
the British Isles and will handle
simultaneous conversations, th
times present capacity.

Work will start at once on the oc

(Continued on page 32)

This machinist is "miking" a disc for one of the largest butterfly valves ever built — 192" diameter. Newport News built 3 such valves, each weighing 446,000 lbs., for the Ross Power Plant, Skagit Project, Department of Light, City of Seattle, Washington. Designed for a water flow of 3,620 cu. ft. per sec., and a hydrostatic pressure of 290 psi., these valves were shop tested by Newport News at 450 psi. They are hydraulically operated with oil at 1,500 psi. pressure.

Birth of a **200-ton** Butterfly

This disc for a 16-foot butterfly valve reflects two basic advantages of Newport News fabrication...

First, it exemplifies the *careful attention* Newport News craftsmen give to every detail. And secondly, it attests to the *quality* with which Newport News produces in massive equipment for public utilities and allied industries... due to Newport News' high integration of skill and production facilities.

Additional advantages accrue to customers from extensive work conducted in Newport News' testing laboratories on problems related to water power equipment.

Avail yourself of the engineering talent, along with the specialized production techniques and the skill of Newport News craftsmen operating vast steel fabricating shops, five huge machine shops, drop forging and die facilities along with acres of brass, iron and steel foundries.

Let us bid on equipment for your present or future projects. If you are not familiar with the way Newport News can help you, write for our illustrated booklet entitled "Water Power Equipment" ...it's yours for the asking.

NEWPORT NEWS

Shipbuilding and Dry Dock Company
Newport News, Virginia

struction, which will take three years to complete. A. T. & T. will have one-half ownership interest in the cable, the other half being divided between the British Post Office and the Canadian Overseas Telecommunications Corp. The British Post Office provides telephone service in Great Britain.

This will be by far the longest underseas voice cable in the world and the first laid at depths found in mid-ocean. The longest underwater telephone cable to date spans 110 miles from Key West, Fla., to Havana, Cuba. This system, in use since 1950, was laid under relatively shallow water.

A. T. & T. said the cable will mean greater reliability in transatlantic telephone conversations. Present radio telephone facilities hinge largely upon atmospheric conditions, with service being interrupted or impaired by stormy weather.

Outdoor Service Equipment Shown In Heinemann Bulletin

THE complete line of Heinemann Outdoor Service Equipment is detailed in the new 12-page bulletin No. 2016, recently published by the Heinemann Electric Company.

Designed to make easier the selection of outdoor service equipment, the new bulletin combines descriptive data on all available standard equipment — service entrance, receptacle type, dual control, three-phase units. Typical assemblies of circuit breakers and the various enclosures are listed for each type of equipment. Also included is a comprehensive guide to the entire line, showing catalog numbers, hub sizes, voltages, ampere ratings and other specifications.

Copies of the bulletin are available from the Heinemann Electric Company, 339 Plum street, Trenton 2, New Jersey.

Pennsylvania Electric Opens New Substation

PENNSYLVANIA Electric Company has placed in operation the first 230 kv transmission line and substation in its 12,912 square mile service area.

The substation, at Lewistown, Pa., was energized November 25th at a brief ceremony attended by company representatives from Lewistown, Altoona, and Penelec's system headquarters in Johnstown. W. H. Wade, vice president and manager of the company's Eastern division, closed a switch starting the flow of power into the substation through a tie with Metropolitan Edison Company, a sister utility in the General Public Utilities Corporation system.

The Lewistown substation, built by Day and Zimmermann, Inc., at a total cost of about $2,000,000, has a capacity of 100,000 kva. Its two transformers distribute power at 115 and 46 kv. The station is tied to the rest of the system communications-wise by telephone, FM radio, and carrier radio.

G-E Announces New 5-KVAR Residential Capacitor

A NEW 5-KVAR residential secondary capacitor, designed to assist utilities to meet the rapidly growing loads at decreasing power factor on distribution systems, has been announced by the General Electric Company's capacitor department, Hudson Falls, New York.

This capacitor will permit improved coördinated system designs because it is in step with the trend toward the use of larger distribution transformers, G-E engineers said.

Features of this new residential secondary capacitor, rated 5 KVAR, 240 volts, single phase, include lower installed cost per KVAR, long life, a ground stud for easy grounding and a durable triple-coat case finish, provided by two coats of Melaglyp paint over a tin plated drawn steel case. The rectangular, hermetically sealed, Pyranol filled case, provides the necessary characteristics for expansion due to temperature changes, in addition to reliable fuse coördination.

Commonwealth Edison to Spend $500,000,000 in 4-year Program

ANOTHER major step in Commonwealth Edison Company's billion dollar construction program has been completed with the addition to the system of a large electric generating unit at the utility's Ridgeland station, according to Willis Gale, E chairman.

The new 150,000-kw unit, has been under construction for years, is the second to be added t system in 1953. A 60,000-kw ins tion was completed at the Dixon linois) station of Commonwe Public Service Company divisio September. With this addition, capacity of the Commonwealth sy is now at a record 3,272,000 watts. This will be increased total of 3,913,000 kilowatts by winter of 1955-56 with the com tion of four more units now u construction.

The system's electric and gas struction program for the eleven- period 1946 through 1956 will about $1,100,000,000. From through 1952 these expendit totaled approximately $600,000, For the four years 1953 through they are estimated at $500,000,00

General Dry Batteries Issue New Catalog

VARIOUS dry batteries designed industrial use, including types su for public utility, railroad, and line service, are illustrated and scribed in a new catalog-style le now available from General Batteries, Inc., Cleveland 7, Ohio

J. R. North Awarded ASA Certificate of Service

J. R. NORTH, Commonwealth sociates, Jackson, Michigan, awarded a certificate of service cently by the American Standards sociation in recognition of his wo in the development of Americ Standards.

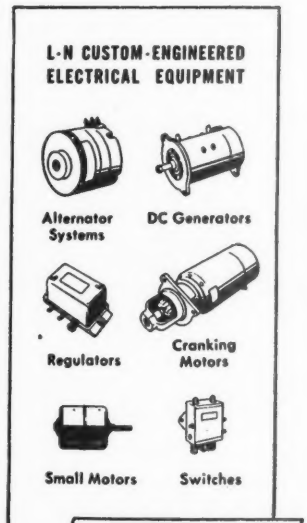
Mr. North represents the Americ Institute of Electrical Engineers the Standards Council, one of AS two governing bodies.

As an AIEE representative, North has been especially active the ASA Committee on Insulators Electric Power Lines. He is also Electric Light and Power Group re resentative on the ASA Commit for Transformers, Regulators a Reactors, and the Committee Lightning Arresters.

(*Continued on page* 34)

EWING GALLOWAY

Recognized Everywhere...



YOU CAN RELY ON Leece-Neville

WHEREVER YOU LIVE, you recognize this view of Chicago, a great city, famed for its beautiful lake shore boulevards. And Chicago recognizes the Leece-Neville Alternator... it is doing a great job there every day on cars and trucks of several utilities.

Chicago is just one of many places where you will find L-N Alternators. They're in Allentown, Amarillo, Portland, Montreal and hundreds of other city and rural utilities, large and small, here and abroad.

More than seven years of reliable performance on thousands of cars and trucks has earned this wide acceptance of the L-N Alternator as a replacement for the conventional d.c. generator.

Because the L-N Alternator delivers 25 to 40 amperes at curb idle, batteries stay charged, vehicles keep rolling, crews stay on the job. L-N Alternators have ample capacity to handle a big load of accessories... up to 95 amperes on 6 volt systems; to 180 amperes for 12 volt. With the L-N Alternator System, two-way radio is safer and clearer. And maintenance and operating costs are much lower.

By attaching an L-N Transformer to the Alternator, 110 volt power is available. Your crews can plug in soldering irons, flood lights, electric drills and other portable power tools. Send for special Transformer folder.

You can rely on L-N Alternators to go on delivering top performance year after year with only routine maintenance. Transferred from car to car, many L-N Alternators have run 500,000 miles and more.

Be sure to specify L-N Alternators on your vehicles. For all the facts, write The Leece-Neville Co., Cleveland 14, Ohio. *Custom-Engineered Electrical Equipment Since 1909.*

L-N Alternators
proved by performance for over 7 years

New Leffel Turbine Installed in Philippine Islands

THE James Leffel and Company has recently built and shipped a new 35-ton hydraulic turbine for the National Power Corporation to be installed at Talomo Dam in the Philippine Islands. Known as "Talomo No. 2" the new turbine was completely assembled at the Leffel plant in Springfield, Ohio and then disassembled and crated for ocean shipment.

According to a Leffel official, the new turbine will play a key part in the rehabilitation plans for the Philippine Islands by generating electricity for small factories in one of the isolated sections.

Ray Little to Direct GAMA Sales Promotion

RAY LITTLE, for the past nine years general sales manager of the Equitable Gas Company, Pittsburgh, has joined the Gas Appliance Manufacturers Association as director of sales promotion.

In this new GAMA post Mr. Little will direct the promotional activities of all of the product divisions of the association — domestic, commercial and industrial — and will coördinate tie-ins for the appliance manufacturers with the $1,250,000 advertising and promotion program of the American Gas Association. His activities will concern all members of the family of gas appliances and equipment — ranges, house heating equipment, refrigerators, water heaters, space heaters, home incinerators, clothes dryers, as well as gasfired equipment used in hotels, restaurants, institutions, commercial establishments and in more than 26,000 industrial heat processes.

EEI Announces First Two 1954 Major Appliance Promotions

TWO new campaigns for promoting electric ranges and electric water heaters on a coördinated industry wide basis in the spring of 1954 have been announced by the Residential Promotion Committee of Edison Electric Institute.

These are the first of five promotions planned for 1954 in which it is expected that all branches of the electrical industry will participate to gain the benefits of concentrated promotional activity during designated months. Electric utilities, manufacturers, distributors, dealers and electrical leagues have all indicated inte tieing-in with the range and heater programs during the mo March, April and May. These were chosen as a result of a conducted last year to set up ördinated promotion calendar industry on major appliances.

Blewett Named Presiden Newport News Shipya

WILLIAM E. BLEWETT, J elected president of the Ne News Shipbuilding and Dry Company at a recent meeting board of directors of the co Mr. Blewett succeeds J. B. ward, Jr. who will retire as pre after nearly forty years' servic will retain his position as cha of the board. Mr. Blewett, wh been executive vice president 1947, is the seventh president sixty-seven year history of the port News Company.

The board also voted promo for two other members of the e tive staff, N. L. Rawlings was e executive vice president and g manager and R. I. Fletcher wi come the chief accounting and fin officer by his election as financia president and comptroller.

PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts, consultants, and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, financing, design, and construction. » »

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PROFESSIONAL DIRECTORY *(continued)*

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[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

*Fortnightly advertisers not in this issue.

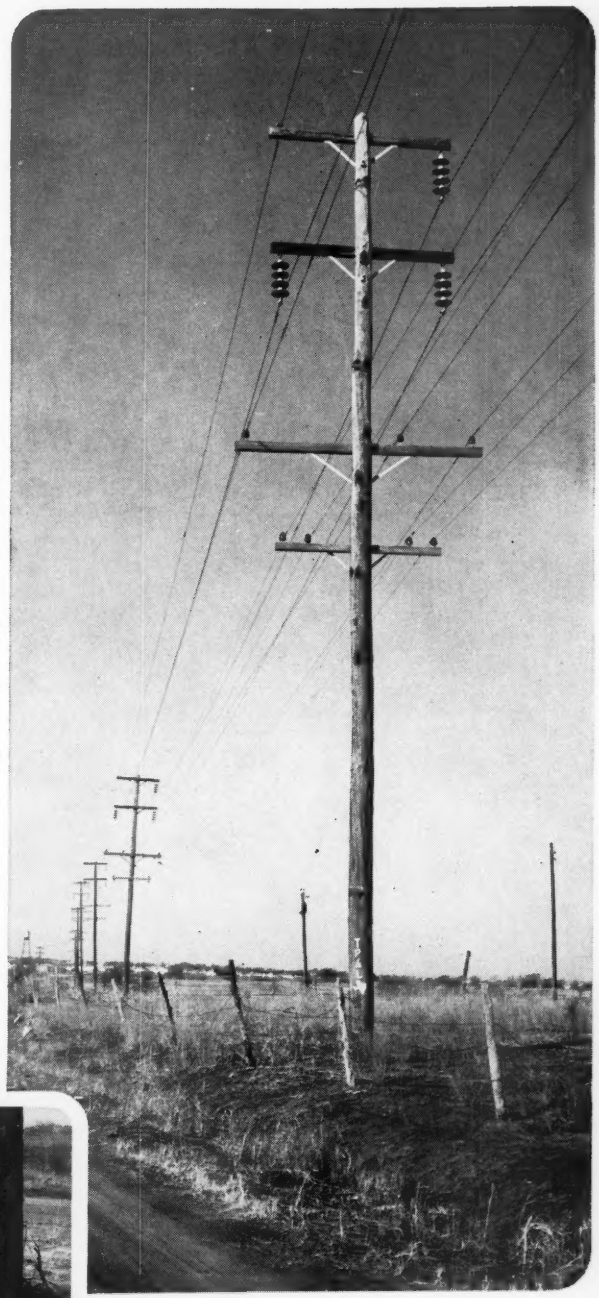
Here's Proof of Performance...

3 out of 4 ssure-creosoted poles in this line are still standing *after 38 years*

re than 40 years ago, Texas Power & Light any turned to the use of pressure-creosoted to counteract the effect of weather and decay. s a wise choice and officials of the utility say : "We have saved many thousands of dollars he years through our use of creosoted poles." ood example of the service life of pressure- ted poles is the Company's line between the s substation in Dallas County, and Royse Here 475 creosoted Southern Yellow Pine were installed in 1916. Today, three of every of these original poles are still standing in of the temperature extremes and biting winds ntered in this area.

en you compare this kind of a service record the 10 to 20 years of life Texas Power & Light etting from untreated poles, you have real of the effectiveness of Creosote's protection. sure your poles are pressure-treated for extra ith U·S·S Creosote. This wood preservative is roduct of continuous processing plants of United States Steel. ch, it is a uniform product, made ve you uniformly good results. omplete information, contact our t Coal Chemical sales office or directly to United States Steel oration, 525 William Penn Place, burgh 30, Pa.

Close-up of one of the 38-year-old poles at the ground line, showing the excellent condition of the treated wood.



Pressure-creosoted poles in the Jenkins-Royse City line of Texas Power & Light Company. 475 poles were installed in 1916—75% of the original poles are still in service.

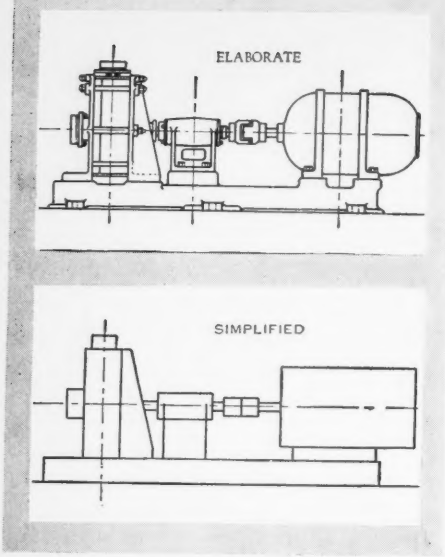
U·S·S CREOSOTE

USS

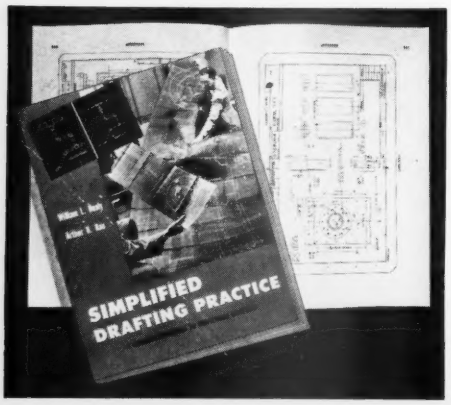
UNITED STATES STEEL

Simplified drafting practice promises savings up to 50% in time, money and materials

SIMPLIFICATION REDUCES 57 SQ FT OF BLUEPRINT TO 4 SQ FT sa s A. H. Manager, Drafting Services, to General Electric draftsmen. He and W. L. Heal , Super Technical Services—Switchgear Department, co-authored "Simplified Drafti g Pra



COMPARISON BETWEEN elaborate and simplified techniques demonstrates ease of showing standard parts.



NEW BOOK, "Simplified Drafting Practice," John Wiley & Sons, gives details.

New Drafting Technique Helps Relieve Manpower Shorta

Simplification cuts time

In face of today's acute shortage of engineers, electric utility companies can make better use of their skilled drafting manpower through a revolutionary new technique for cutting the time spent by draftsmen painstakingly drawing standard components again and again. This also allows more creative analysis of problems—a higher use of a draftsman's ability.

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Reduced to fundam ntals new approach saves tim and by (1) Simplification f de tion, (2) Elimination of essentials, and (3) Mor exte use of free-hand drawin .

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